

# Chilton's MOTOR AGE

MAY 1955



In This Issue:

## Win the Original of This Painting

—see page 37

# 2 TOP PERFORMERS



(1) The Hastings torsional is a compression ring that seats *right now*. Its torsional action brings it into a quick seat and perfect wall bearing in any cylinder—tapered, out-of-round or re-bored.

(2) The Hastings Steel-Vent is an oil ring that stops oil-pumping immediately. It's a *soft pressure* ring with the light inner-spring developed by Hastings. It delivers the extra lubrication that older engines must have—and with complete oil control and economy.

Here are two *top performers* in the same "Motor Engineered" set . . . built by replacement ring specialists.

You don't get come-backs due to cylinder scuffing and slow-seating when you install Hastings Steel-Vent sets. You get positive, quick performance that makes car owners happy.



\*TOUGH but oh so gentle



HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN  
HASTINGS LTD., TORONTO

Piston Rings, Casite, Oil Filters, Spark Plugs

## HASTINGS STEEL-VENT PISTON RING

*Regular or Chrome Faced*

\*Tough on oil-pumping • Gentle on cylinder walls



# PERMATEX BRAKE FLUID

(REGULAR AND HEAVY DUTY SAE SPECIFICATION)

Just check the cost of a heavy gauge, five gallon spout-type gas can. Then you'll know how valuable a premium you get when you buy Permatex SAE specification Brake Fluid in this handy container.

Regular prices for Permatex Brake Fluid apply. You pay not one extra penny for the container. It will come in handy for a hundred and one uses. You can even resell it.

IN THIS  
HANDY  
RE-USABLE  
CONTAINER  
AT  
NO EXTRA  
COST

PAPER LABEL  
EASILY REMOVED  
WHEN DRUM IS  
EMPTY

FOR  
EMERGENCY  
GAS

HEAVY  
GAUGE  
WILL LAST  
FOR YEARS

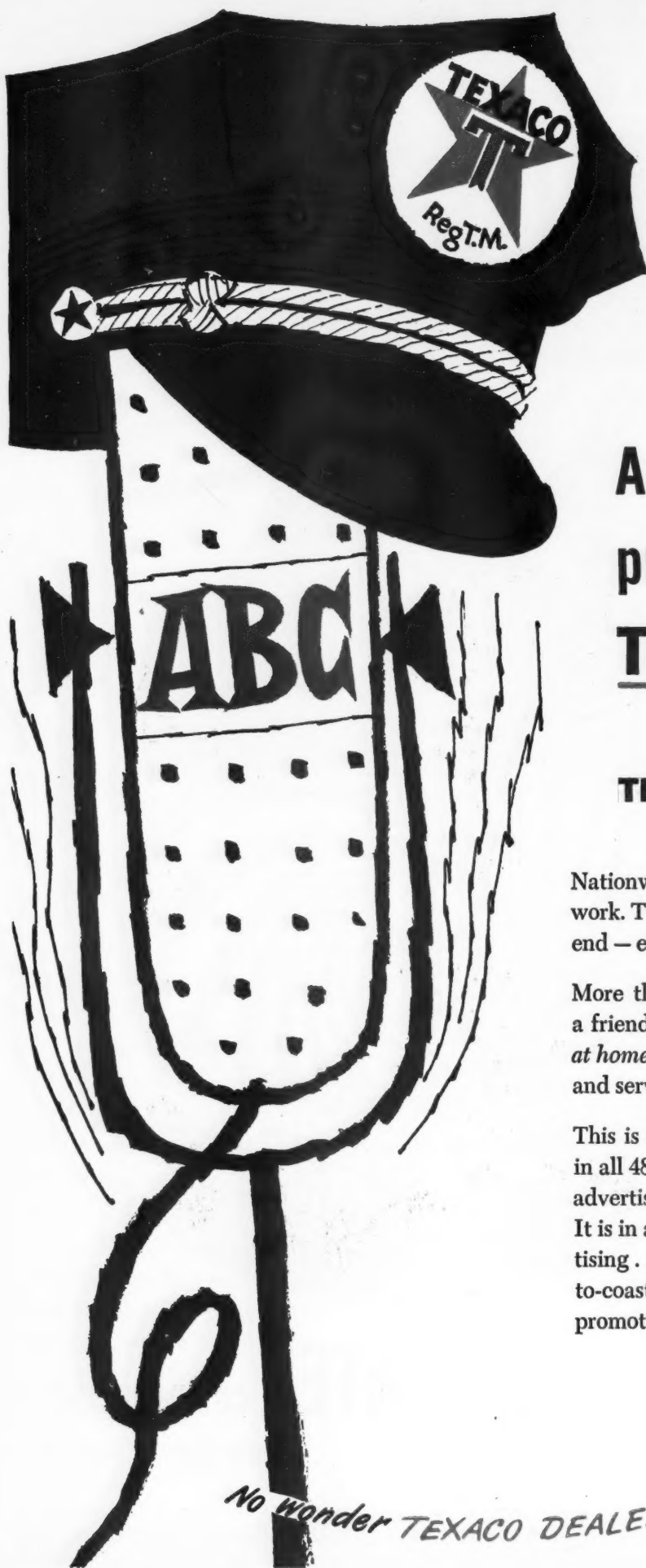


Permatex Regular and Heavy Duty Brake Fluid meets or exceeds SAE specifications. Both types contain corrosion inhibitors and will readily mix with any similar fluid. Order through your local supplier. If he does not have a stock in this special container, send your order to Permatex, giving your jobber's name and you will get your requirements promptly.

**PERMATEX** COMPANY, INC.

Brooklyn 35, N. Y. • Kansas City 15, Kansas

MORE THAN 50 CHEMICAL PRODUCTS FOR BETTER AUTOMOTIVE MAINTENANCE



# Extra!

## Another big, extra promotion push for **TEXACO DEALERS**

**... now sponsoring the  
TEXACO NEWS REPORTER**

Nationwide — on the 346-station ABC Radio Network. Twenty-two 5-minute newscasts every week-end — eleven on Saturday, eleven on Sunday.

More than 250,000 newscasts all told. Each with a friendly, forthright message to remind motorists *at home and on the road* of Texaco Dealer products and services.

This is one more sales builder for Texaco Dealers in all 48 states . . . another example of the powerful advertising support Texaco Dealers always enjoy. It is in addition to magazine and newspaper advertising . . . TV and other radio programs . . . coast-to-coast billboards . . . dealer displays and extensive promotion material.

THE TEXAS COMPANY

*No wonder TEXACO DEALERS are such busy dealers!*

# Chilton's MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

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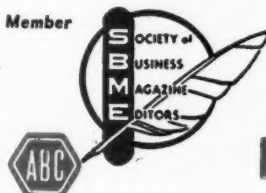
LXXIV, No. 6

May, 1955

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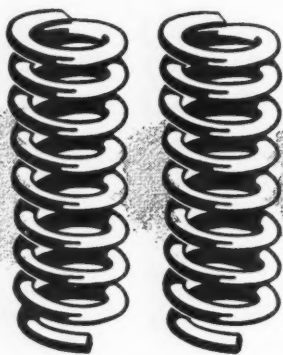
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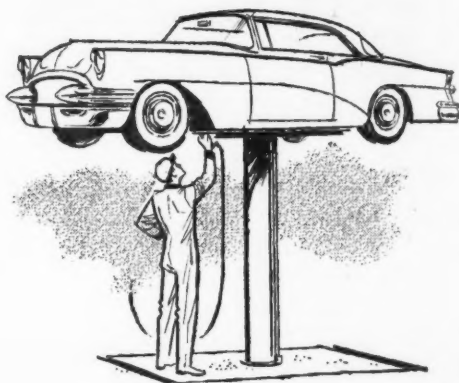
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# HOW ARE MOOG COIL SPRINGS LIKE A GREASE RACK?



Most of the cars a hydraulic grease rack is expected to lift are the lighter, more popular models. But it's designed to support the heaviest Cadillac, too—and then some!



## Both have a **Built-in Overload Factor!**

Many brands of coil springs will perform satisfactorily under *ideal* driving conditions. Even shims and “gadgets” will sometimes correct Front-End Sag—*temporarily*.

But on rough roads...or under heavy loads...or during long operating periods, your customers' cars *need* the “ride-ability” and durability of Moog Coil Springs. Especially older vehicles in which other suspension parts are worn and overstressed.

Like a hydraulic grease rack, Moog Coil Springs are designed with a *Built-in Overload Factor*—an extra margin of safety!

### Design Does It

Many factors affect the design of a coil spring: gauge of the bar, type of steel, heat treatment, and number of coils. All these factors are carefully controlled in the design and manufacture of Moog Coil Springs so that the finished spring will carry the car at the right height, give a smoother ride, and last longer under *all* driving conditions.

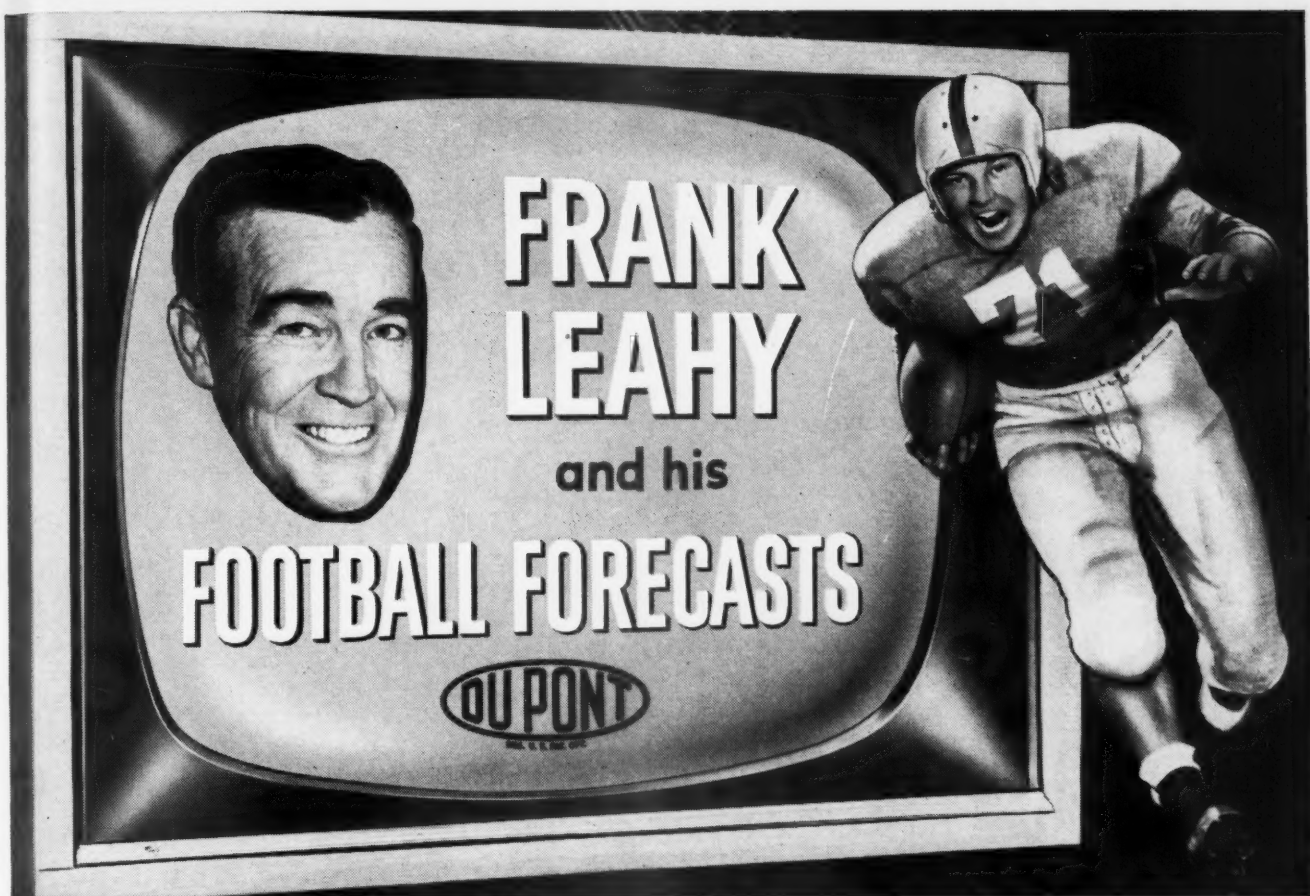
Take a tip from Wheel Alignment Specialists: To avoid costly come-backs, specify the coil springs designed especially for the replacement market. *Install Moog Coil Springs in matched pairs!*

**GHQ** for Coil Springs • Leaf Springs  
Tie Rod Ends • King Bolt Kits • Shackles  
Coil Action • Piston Rings



**MOOG INDUSTRIES, INC. • ST. LOUIS 14, MO.**





## Du Pont anti-freeze gives you the biggest TV campaign in the industry

This year Du Pont anti-freeze will have a TV show that's bound to break all records! Frank Leahy is the star! That's right, the famous football coach who led Notre Dame to 106 victories, will be *selling* for you all through the fall season. "Frank Leahy and his Football Forecasts" will be a weekly *must* for your customers. He'll send them to you—not only for "Zerone" and "Zerex," but he'll sell 'em on the idea of early winter service. And you know what

that means in dollars and cents to you. You'll sell service, parts, accessories . . . the works!

Du Pont anti-freeze gives you Frank Leahy, and that's just the beginning. Just look what else you get:

- ▶ Nation-wide Du Pont "Anti-Freeze Week" promotion
- ▶ Newspaper, magazine ads, billboards, in your own town
- ▶ Backing by famous motor experts
- ▶ A product advantage you can see for yourself
- ▶ Enforcement of Fair Trade prices—no employee sales

✓ Order now and be listed with Western Union "Operator 25"

*Sell the anti-freeze team that helps YOU sell!*

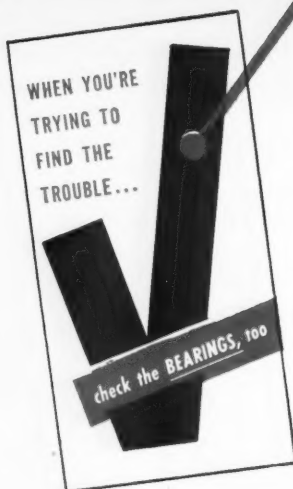


Du Pont makes only ZERONE® and ZEREX® brands of anti-freeze

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY



When you're  
trying to  
find  
the  
trouble...



Get this useful BCA Trouble Shooter's Guide. Ask your BCA—Federal-Mogul jobber for a copy, or write us. It's free.

## CHECK THE BEARINGS, TOO

Weird wheel noises • Squeaking or chattering brakes • Car pulls to one side • Frequently, you'll find a bad wheel bearing is to blame.

This new BCA Trouble Shooter's folder also helps trace many hard-to-locate generator, clutch, transmission and differential troubles to worn or defective bearings. Helps you to win and hold customers.

### THE RIGHT AUTOMOTIVE REPLACEMENT BEARINGS ARE EASIER TO INSTALL

BCA ball bearings are designed for automotive replacement. They're not nearly right—they're exactly right. And your BCA—Federal-Mogul jobber knows automotive bearings—knows your problems—speaks your language.



Chilton's MOTOR AGE, MAY, 1955

THE SATURDAY EVENING POST

77

Now—your car can have modern power brakes!



**NOTE:** "Spectacle test" above—proves easy action of MoPar Power Brakes! To demonstrate the small amount of pressure required on the brake pedal to bring car to stop—eyeglasses were first placed on the pedal. Eyeglasses were not damaged.

**SAFE—WITH BRAKE REPLACEMENT PARTS THAT ARE ENGINEERED FOR YOUR CAR!**



Service tip: Play safe with brake parts that fit right and work right in your Chrysler Corporation vehicle! Trust MoPar on parts provided in the MoPar Master Cylinder Repair Kit and MoPar Wheel Cylinder Repair Kit!

**For cooler operating, safer brakes, get MoPar Heavy-Duty Brake Fluid!**

There is far less chance for brake "fade" and failure due to overheated brake fluid when you use MoPar Brake Fluid. Reason is, boiling point of MoPar Brake Fluid is almost twice that of ordinary brake fluids.



**MAY IS NATIONAL SAFETY MONTH—  
BE SURE TO GET A MOPAR SAFETY CHECK!**

MoPar is the name of parts and accessories designed especially for Plymouth, Dodge, De Soto, Chrysler and Imperial cars, and Dodge "Job-Rated" trucks.

**New low-cost MoPar Power Brake Unit gives faster stops with half the effort—and it's easy to install!**

If your car is "dated" for lack of power brakes, here's good news for you.

Now, you can enjoy the safety and ease of genuine power brakes just like those offered in the '55 cars.

Like thousands of other motorists, you'll find that a MoPar Power Brake Unit enables you to make the fastest, smoothest stops imaginable—with half the effort you'd normally use!

Today's finest power brakes are yours at a price to fit the modest purse. Get your MoPar Power Brakes from your Plymouth, Dodge, De Soto or Chrysler dealer or buy them at MoPar dealers everywhere.

**MOPAR**

PARTS DIVISION • CHRYSLER CORPORATION • DETROIT 31, MICHIGAN

*Nationally  
advertised in The  
Saturday Evening  
Post, Popular  
Mechanics,  
Popular Science,  
and Mechanix  
Illustrated.*

**Here's more national advertising to  
increase your sales  
of MoPar products!**

Sales-producing ads like the one shown above are making your customers "MoPar-minded" and ready to buy these name-brand products.

Tie in with this strong advertising program and the May National Safety promotion: Make sure you have an adequate stock of these MoPar safety items to fill your customers' safety requirements. Contact your nearby Chrysler Corporation dealer or MoPar parts wholesaler, today!

**PARTS DIVISION • CHRYSLER CORPORATION**

**DETROIT 31, MICHIGAN**

**MOPAR**



# TO THE TOP

R. A. STRANAHAN, President  
F. D. STRANAHAN, Treasurer

CABLE ADDRESS  
"CHAMPION"

## CHAMPION SPARK PLUG COMPANY

FELTHAM, ENGLAND      PARIS, FRANCE      WINDSOR, CANADA

May 1, 1955

Dear Champion Dealer:

Your advertising will appear on regular schedule in the Reader's Digest beginning with the May issue . . . and that's important news for everyone who sells Champion Spark Plugs!

The Digest gives your advertising the largest audience reached by any American publication. Each issue is read by thirty-five million people! And it's a special audience with a loyalty to the Digest that cannot be duplicated. They believe what they read in the Digest, and their response to Digest advertisements is sure to be strong.

Hundreds of companies felt the same way, we understand, and applied for space when the Digest decided to accept advertising for the first time in its quarter century of existence. A great many were refused because only 32 advertisements will be carried each month. Champion was selected not only for 1955 but also for 1956, and full-page, two-color Champion advertisements will appear every other month beginning this month.

This is good news because it adds millions of prospective customers to what already is the industry's largest spark plug advertising program. And it adds plenty of strength to the advertising and sales superiority you enjoy over your competition.

Sincerely,

*Jim L*

P.S. Here's a real one-two sales punch for Champion merchandisers. A Champion-equipped D-type Jaguar, a Ferrari and a Maserati outdistanced all opposition at Sebring, Florida, in America's only internationally recognized sports car Grand Prix. A week later Champions scored their sixth straight victory in the Mobilgas Economy Run, giving a Studebaker Commander 27.43 miles per gallon for the 1325 miles.





# DEALERS IN THE NATION

AND NOW... You're in  
*Reader's Digest!*



**CAR DISTANCE TIME SPEED SPARK PLUGS**

*Packard*  
25,000 Miles  
238 Hours, 41 Min.  
104.73 M.P.H. Average  
5-Rib Champions!

**NEVER BEFORE HAS ANY CAR GONE SO FAR, SO FAST!**

Its mighty V-8 engine, spurred by 5-Rib Champion Spark Plugs, a Packard Sedan powered by a pre-production 1955 Packard Patrician engine made automotive history in a 25,000-mile endurance test certified and timed by the Contest Board of the American Automobile Association. All distance-speed records were exceeded as this great motorcar covered a distance greater than the earth's circumference at the equator with an average speed of 104.73 m.p.h. Full-firing Champions—exactly as supplied by your neighborhood Champion dealer—functioned perfectly during the entire run, turning every drop of gasoline into useful power, turning the sleek Packard to one of the greatest performance runs ever attained by a motorcar.

**NOTE: PROOF** for all motorists that 5-Rib Champions and top performance are a natural combination. **NOTE: REASON** why you should make the change to Champions—soon!

AMERICA'S FAVORITE  
5-RIB  
**CHAMPION**  
SPARK PLUGS

**NEXT TIME YOUR CAR IS LUBRICATED—HAVE THE SPARK PLUGS CHECKED. IT PAYS!**

CHAMPION SPARK PLUG COMPANY, TOLEDO 1, OHIO

Thirty-Five Million People Believe  
What They Read in the Digest!

# GET IN ON THE HOTTEST PROFIT PLAN EVER TO HELP YOU BUILD BRAKE BUSINESS

## Raybestos® **7** POINT BRAKE CHECK

INCLUDING ADJUSTMENT

Wheels off pay off when you make this 7-Point Check. You get more brake work. And with the Raybestos Plan you can charge for every check you make. See your Raybestos jobber for details now.

### HERE'S WHAT YOU DO—

- 1 Pull front wheels and inspect linings
- 2 Check brake drums
- 3 Inspect front wheel bearings
- 4 Clean brake assembly
- 5 Check hydraulic system
- 6 Adjust brakes
- 7 Road-test brakes

### BACKED BY ADS LIKE THIS

Telling Car Owners in Your Neighborhood to Ask for the 7-Point Check



### AND HERE'S THE COMPLETE SELLING PACKAGE YOU GET—



### RAYBESTOS "CONTOUR GRINDING" WILL HELP YOU CASH IN

Raybestos "Contour Grinding" assures true shoe radius. All Raybestos Lined Shoes are "Contour Ground" for perfect lining-to-drum contact. No chance of high spots—no spongy pedal action due to excessive belly contact.



SEE YOUR RAYBESTOS JOBBER NOW.  
OR WRITE US DIRECT.

Reline with  
**Raybestos**  
AMERICA'S BIGGEST SELLING BRAKE LINING

RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., BRIDGEPORT, CONN.



RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings • Fan Belts • Radiator Hose • Industrial Rubber, Engineered Plastic, and Sintered Metal Products • Rubber Covered Equipment • Asbestos Textiles • Packings • Abrasive and Diamond Wheels • Bowling Balls



# AC *does it again!*

## With a Big, New, Idea-Packed SPRING OIL FILTER CAMPAIGN\*

Spring's in full stride! The big summer driving season looms ahead! Everyone is in the "getting-ready" mood! And right into that selling atmosphere comes AC—with a May OIL FILTER program that's sure to pay off in sales! Here is the selling support from AC.



New oil and oil filter sales maker! A huge, full color, king-size cutout of the famous AC Sludgehound with his AC Oil Filter ready for Rescue work—AND his mate with Your brand of oil.



National Magazines! Post, Life, Look, Collier's, Better Farming and many other publications will carry the spring campaign.



Plus full color program book that tells you how one dealer upped his business—and how you can do the same.



AC's dramatic TV show "Big Town" will carry strong selling commercials on the superiorities of AC Oil Filters and recommend to motorists everywhere—"See your AC dealer!"

New window trim! Perforated strips: "Change Oil and Filter Now" tie in with your selling theme and can be used in several ways in your windows.

Smashing billboards! 5,000 of them on the nation's most traveled highways! They tell your customers: "Change Oil and Filter." You'll receive a miniature of this poster for your window.



\*ASK YOUR AC SUPPLIER FOR THIS VALUABLE CAMPAIGN PACKAGE

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION • FLINT, MICHIGAN

Chilton's MOTOR AGE, May, 1955





## To the dealer who wants to know WHAT ADVERTISING CAN DO FOR HIM

Perhaps one of the reasons why so many people in distribution have so little appreciation of the advertising support they get from their suppliers is that they don't know what advertising can do for them.

Advertising support in the *right place* will reach the people you have to sell to stay in business, and influence them favorably toward the products you sell. The question is, Where is the right place?

If you're a typical car dealer or shop owner, you're like most of the other car dealers and shop owners in the United States: you're located in Country-Side America. That's where the 23,000,000 families who buy most of the cars and

have most of the service work done also live. That's why the Country-Side market is America's biggest automotive market.

If your place of business is here and your supplier is giving you advertising support in the Country-Side Unit, congratulate him—and yourself. Because it meets the needs of this market as nothing else can, the Country-Side Unit has become the largest sales force among these 23,000,000 families—*your* best customers and prospects. And it has influence among these people even greater in proportion than its size.

Thus advertising in the Country-Side Unit does two things: it reaches the best customers in

your territory with the impact of a local newspaper and it influences these people favorably toward the products you sell.

If you're not getting sales support in the Country-Side Unit, then start asking for it. That's what *you* can do about getting the kind of advertising that will really do a job for you.

CSU

**Farm Journal**

The magazine farm families depend on

**Town Journal**

The magazine town families depend on



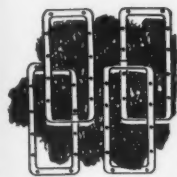
# Electronic Baked Cork

**MEANS BETTER SEALING**

**WITH Armstrong-Victor  
GASKETS**

It was bound to come with the electronic age—this exclusive Armstrong-Victor cork curing process. It's the biggest improvement in cork gaskets in half a century. Now A-V cork is cured thoroughly, evenly, in minutes instead of the hours it takes with steam—and with much lower heat. Now A-V's process stops loss of sealing efficiency by over-baking or under-baking—steam's greatest weakness in curing cork.

## A-V Gaskets Have Uniform Density



Electronic baking heats the cork composition from inside out. Each cork granule gets the same heat under equal compression. This produces a uniformity of density impossible with steam curing.

## A-V Gaskets Have Greater Strength

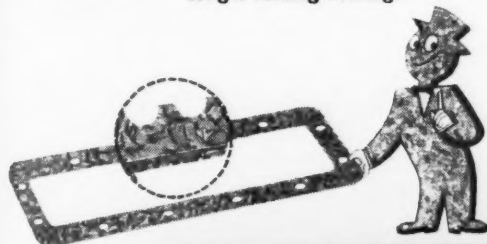


The uniformity of electronic baking . . . at lower heat under controlled time and temperature cycle . . . increases the tensile strength of cork composition. This means A-V gaskets can take shop handling easier with added safety against damage.

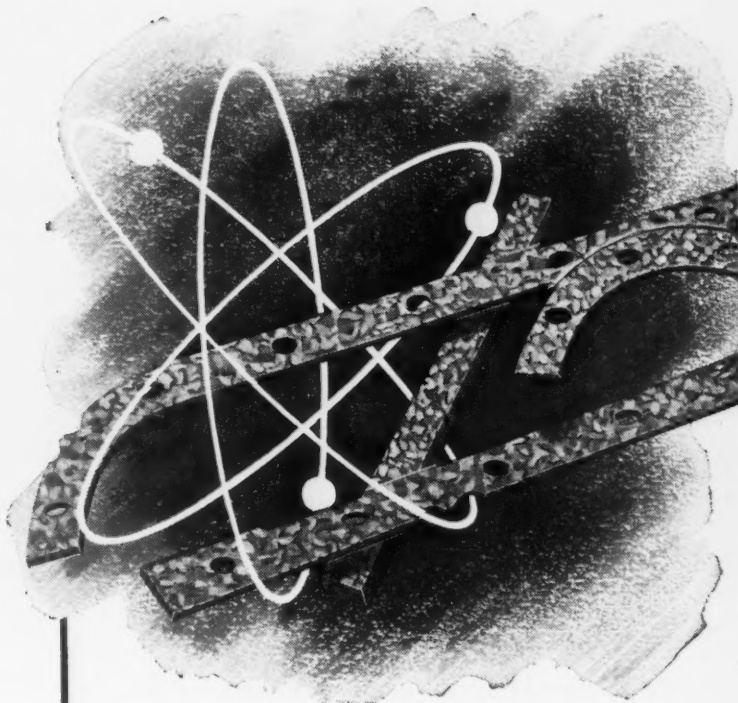
## A-V Gaskets Have Livelier Sealing Power!



Lower temperature, uniform heat electronic curing precisely controlled, retains more natural liveliness of cork. This gives A-V gaskets a wider, more uniform compression and recovery range for longer lasting sealing.



Only genuine Armstrong-Victor Replacement Cork Gaskets have this trade-mark—the 2 notches.



## A-V Gaskets Never Fail to Fit



They're die-cut sharp and clean to exact dimension. All holes are round . . . sides straight . . . all openings accurately shaped. A-V methods and tools are the best in the business.

**YOUR VICTOR WHOLESALER** carries complete factory-fresh stocks—for every make and model—in this familiar package. Sold in sets or individual parts. Victor Mfg. & Gasket Co., P.O. Box 1333, Chicago 90, Ill.



# Armstrong-Victor



Nation-wide Survey of GM Dealers and Customers Shows:

# 51% OF BUYERS WHO PASSED UP **Safety** **POWER STEERING**

**WANTED IT!**



Yes—*over half* the GM customers we interviewed who *didn't* buy Safety Power Steering last year, passed it up because of price alone! This year at the new, substantially lower price, salesmen from coast to coast are reporting sharply increased sales of S.P.S.

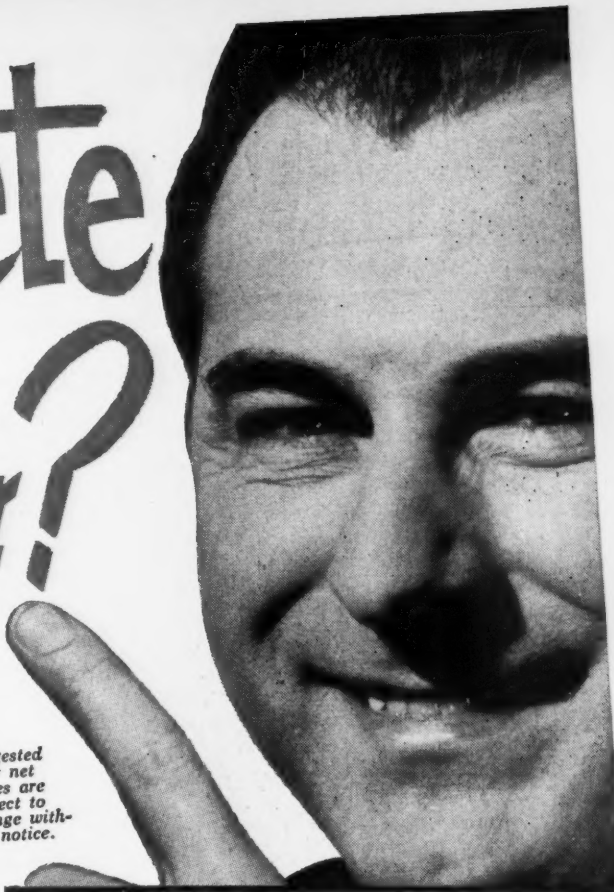
Now, figured in on the popular 24-month car-payment plan, Safety Power Steering costs **LESS PER DAY THAN A COUPLE OF CUPS OF COFFEE—OR A PACK OF CIGARETTES!** Practically **EVERYBODY** can afford that—so make sure **EVERYBODY** gets behind the wheel before you deal! Emphasize that S.P.S. adds so little to their monthly payments they'll scarcely notice the difference—and watch your "take" increase! Saginaw Steering Gear Division, General Motors Corporation, Saginaw, Michigan.

**IT PAYS TO PUSH**

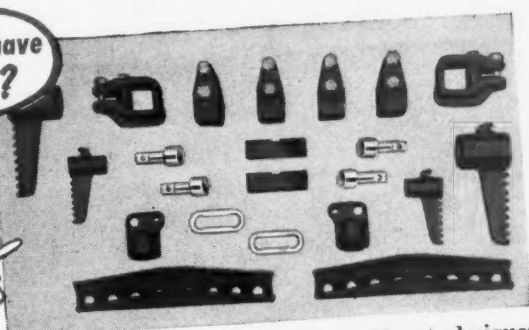
**Safety POWER STEERING**  
by **Saginaw**

**NOW IT'S PRICED TOO LOW  
TO PASS UP!**

# How incomplete is YOUR Profit-Power?



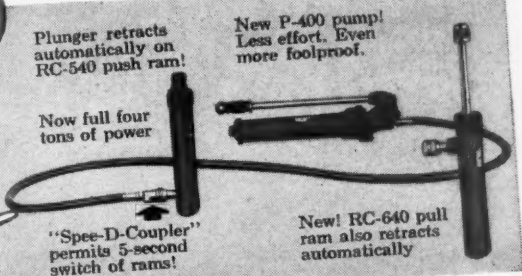
Do you have THIS?



Suggested User net prices are subject to change without notice.

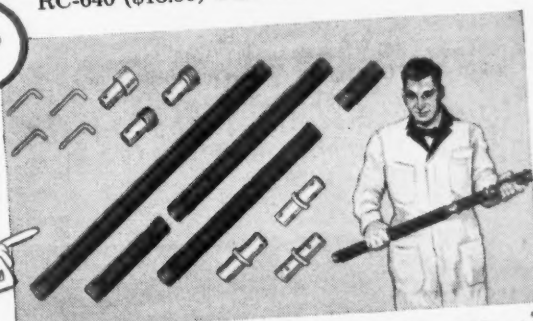
**NEW!** Multi-purpose pull clamps. New techniques snap damaged metal back into position without stretching or distortion. Ask for amazing "Pull Clamps"; AZ-12 ass't (\$46.70) for Bantam; FZ-13 (\$51.80) ass't for 10-ton "Porto-Power"

or THIS?



**NEW!** Bantam "Porto-Power" is now even more powerful, more foolproof! Now more than ever it's the world's fastest body jack equipment! Ask for new "Bantam" SA-50 (\$43.30) hydraulic unit and RC-640 (\$18.50) Pull Ram.

or THIS?



**NEW!** "Lock-On" double purpose tubing slides together quick as a wink! Can cut 50% off time it takes to make set-ups. Can also be threaded together. Ask for "Bantam" AZ-13 ass't (\$19.95) or FZ-14 (\$31.60) 10-ton "Lock-On" tubing.

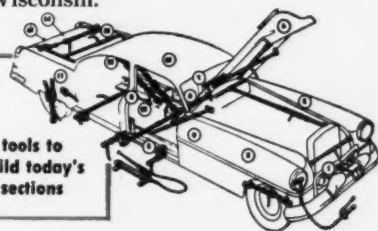
## Bring YOUR Porto-Power up to date! GET MORE BODY SHOP PROFITS!

The secret in getting more profitable business is to cut labor costs. And by today's standards, labor costs are sky high on modern cars without the latest Blackhawk "Porto-Power" tools! That's because recent cars have bigger metal sections, more rigidity, tricky reinforcements, etc., that can only be licked efficiently if you have these new Blackhawk developments. SO ACT TODAY to bring your "Porto-Power" up to date.



Now—you can have your "Porto-Power" rated for its "Profit Power" . . . just like a motor is rated for "horsepower." Ask your jobber for free rating of equipment now in your shop — or write Blackhawk Mfg. Co., Dept. P-655, Milwaukee 46, Wisconsin.

You need the COMPLETE FAMILY of "Porto-Power" tools to efficiently rebuild today's 20 major body sections



Only **BLACKHAWK** makes **Porto-Power**



# SAVE ½ to 1½ hours



You can depend upon WAGNER QUALITY because Wagner Products are used as original equipment by car, bus, truck, and trailer manufacturers.

B55-6

Est.  
1891

# Wagner

*...the best known  
name in brake service*

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID... NoKOL... CoMaX BRAKE LINING... AIR BRAKES... TACHOGRAPHS... ELECTRIC MOTORS



# per job... profitably--

## with EXCHANGE SHOE SETS

relined with genuine

# WAGNER® CoMaX BRAKE LINING

either "bonded-on" or "riveted-on"

Increase profits on brake reline jobs and eliminate the drudgery of delining, cleaning, and relining, by using Wagner Exchange Shoe Sets. They are available for all popular passenger cars and some light trucks with both standard and over-size lining thicknesses, either "bonded-on" or "riveted-on". Shoes are cleaned, inspected, degreased and repainted before being relined with Wagner CoMaX Brake Lining. This saves your shop from ½ to 1½ hours per job depending upon its facilities and gives you the benefit of mass production methods and strict performance testing. This assures complete customer satisfaction and substantial profit on every brake reline job.

You profit in countless other ways, too, by using Wagner Exchange Shoe Sets. They enable you to speed up customer service and give you more time for other profitable jobs. You eliminate costly equipment pur-

chases... big investments in lining inventory... and the need for extra help in peak rush seasons.

And best of all, every exchange shoe set is lined with Wagner CoMaX Brake Lining. This performance-proven lining is uniform in density, composition, and frictional qualities throughout its entire service thickness. It will never compress, absorb moisture, or deteriorate with age. Withstands excessively high operating temperatures... contains no harmful abrasive materials to injure drums. It is also available in sets, rolls, blocks, slabs, and cut segments to meet every vehicle requirement.

You can get Wagner CoMaX Brake Lining as well as Wagner Lockheed Hydraulic Brake Parts and Fluid from one convenient, reliable source—your nearest Wagner Jobber. See him today.

**BOOST PROFITS BY BECOMING A  
WAGNER FRANCHISED DEALER**



... TRANSFORMERS ... INDUSTRIAL BRAKES

**Wagner Electric Corporation**  
6498 PLYMOUTH AVE., ST. LOUIS 14, MO., U.S.A.  
(Branches in principal cities in U.S. and in Canada)

Fill out and mail coupon for full facts on this profitable program that's sweeping the country. No obligation.

NAME \_\_\_\_\_  
FIRM NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

**FRANCHISED  
Wagner  
Lockheed  
BRAKE PRODUCTS  
DEALER**

## First in the Post

A lot of time was lost (and a lot of tempers, too!) lighting the old acetylene "lamps." Then electric headlights came out, bringing better illumination—and at the flick of a switch! News of this, and most other automotive advances, was spread first and foremost in The Saturday Evening Post... the first electric-headlight-bulb advertisement in the Post (right) appeared in the March 18, 1922 issue. Because it has been so successful in turning reader interest into a visit to the dealer, today as yesterday, when it comes to automotive advertising...

## The Post is first

THE SATURDAY EVENING POST

### NATIONAL MAZDA

How to Get the Right Lamps for Your Car



**Protect Yourself!**  
Buy National Mazda Auto Lamps

So we, before you get a lamp or two, let us tell you what the Mazda lamp is. It is the only lamp that will give you the best light, the longest life, and the least trouble. It is the only lamp that will give you the best light, the longest life, and the least trouble. It is the only lamp that will give you the best light, the longest life, and the least trouble.

The Mazda lamp is the only lamp that will give you the best light, the longest life, and the least trouble. It is the only lamp that will give you the best light, the longest life, and the least trouble. It is the only lamp that will give you the best light, the longest life, and the least trouble.

**AUTOMOBILE LAMPS**

Model	Wattage	Price
Model A	15	\$1.50
Model B	25	\$2.50
Model C	35	\$3.50
Model D	45	\$4.50
Model E	55	\$5.50
Model F	65	\$6.50
Model G	75	\$7.50
Model H	85	\$8.50
Model I	95	\$9.50
Model J	105	\$10.50
Model K	115	\$11.50
Model L	125	\$12.50
Model M	135	\$13.50
Model N	145	\$14.50
Model O	155	\$15.50
Model P	165	\$16.50
Model Q	175	\$17.50
Model R	185	\$18.50
Model S	195	\$19.50
Model T	205	\$20.50
Model U	215	\$21.50
Model V	225	\$22.50
Model W	235	\$23.50
Model X	245	\$24.50
Model Y	255	\$25.50
Model Z	265	\$26.50
Model AA	275	\$27.50
Model AB	285	\$28.50
Model AC	295	\$29.50
Model AD	305	\$30.50
Model AE	315	\$31.50
Model AF	325	\$32.50
Model AG	335	\$33.50
Model AH	345	\$34.50
Model AI	355	\$35.50
Model AJ	365	\$36.50
Model AK	375	\$37.50
Model AL	385	\$38.50
Model AM	395	\$39.50
Model AN	405	\$40.50
Model AO	415	\$41.50
Model AP	425	\$42.50
Model AQ	435	\$43.50
Model AR	445	\$44.50
Model AS	455	\$45.50
Model AT	465	\$46.50
Model AU	475	\$47.50
Model AV	485	\$48.50
Model AW	495	\$49.50
Model AX	505	\$50.50
Model AY	515	\$51.50
Model AZ	525	\$52.50
Model BA	535	\$53.50
Model BB	545	\$54.50
Model BC	555	\$55.50
Model BD	565	\$56.50
Model BE	575	\$57.50
Model BF	585	\$58.50
Model BG	595	\$59.50
Model BH	605	\$60.50
Model BI	615	\$61.50
Model BJ	625	\$62.50
Model BK	635	\$63.50
Model BL	645	\$64.50
Model BM	655	\$65.50
Model BN	665	\$66.50
Model BO	675	\$67.50
Model BP	685	\$68.50
Model BQ	695	\$69.50
Model BR	705	\$70.50
Model BS	715	\$71.50
Model BT	725	\$72.50
Model BU	735	\$73.50
Model BV	745	\$74.50
Model BW	755	\$75.50
Model BX	765	\$76.50
Model BY	775	\$77.50
Model BZ	785	\$78.50
Model CA	795	\$79.50
Model CB	805	\$80.50
Model CC	815	\$81.50
Model CD	825	\$82.50
Model CE	835	\$83.50
Model CF	845	\$84.50
Model CG	855	\$85.50
Model CH	865	\$86.50
Model CI	875	\$87.50
Model CJ	885	\$88.50
Model CK	895	\$89.50
Model CL	905	\$90.50
Model CM	915	\$91.50
Model CN	925	\$92.50
Model CO	935	\$93.50
Model CP	945	\$94.50
Model CQ	955	\$95.50
Model CR	965	\$96.50
Model CS	975	\$97.50
Model CT	985	\$98.50
Model CU	995	\$99.50
Model CV	1005	\$100.50
Model CW	1015	\$101.50
Model CX	1025	\$102.50
Model CY	1035	\$103.50
Model CZ	1045	\$104.50
Model DA	1055	\$105.50
Model DB	1065	\$106.50
Model DC	1075	\$107.50
Model DD	1085	\$108.50
Model DE	1095	\$109.50
Model DF	1105	\$110.50
Model DG	1115	\$111.50
Model DH	1125	\$112.50
Model DI	1135	\$113.50
Model DJ	1145	\$114.50
Model DK	1155	\$115.50
Model DL	1165	\$116.50
Model DM	1175	\$117.50
Model DN	1185	\$118.50
Model DO	1195	\$119.50
Model DP	1205	\$120.50
Model DQ	1215	\$121.50
Model DR	1225	\$122.50
Model DS	1235	\$123.50
Model DT	1245	\$124.50
Model DU	1255	\$125.50
Model DV	1265	\$126.50
Model DW	1275	\$127.50
Model DX	1285	\$128.50
Model DY	1295	\$129.50
Model DZ	1305	\$130.50
Model EA	1315	\$131.50
Model EB	1325	\$132.50
Model EC	1335	\$133.50
Model ED	1345	\$134.50
Model EE	1355	\$135.50
Model EF	1365	\$136.50
Model EG	1375	\$137.50
Model EH	1385	\$138.50
Model EI	1395	\$139.50
Model EJ	1405	\$140.50
Model EK	1415	\$141.50
Model EL	1425	\$142.50
Model EM	1435	\$143.50
Model EN	1445	\$144.50
Model EO	1455	\$145.50
Model EP	1465	\$146.50
Model EQ	1475	\$147.50
Model ER	1485	\$148.50
Model ES	1495	\$149.50
Model ET	1505	\$150.50
Model EU	1515	\$151.50
Model EV	1525	\$152.50
Model EW	1535	\$153.50
Model EX	1545	\$154.50
Model EY	1555	\$155.50
Model EZ	1565	\$156.50
Model FA	1575	\$157.50
Model FB	1585	\$158.50
Model FC	1595	\$159.50
Model FD	1605	\$160.50
Model FE	1615	\$161.50
Model FF	1625	\$162.50
Model FG	1635	\$163.50
Model FH	1645	\$164.50
Model FI	1655	\$165.50
Model FJ	1665	\$166.50
Model FK	1675	\$167.50
Model FL	1685	\$168.50
Model FM	1695	\$169.50
Model FN	1705	\$170.50
Model FO	1715	\$171.50
Model FP	1725	\$172.50
Model FQ	1735	\$173.50
Model FR	1745	\$174.50
Model FS	1755	\$175.50
Model FT	1765	\$176.50
Model FU	1775	\$177.50
Model FV	1785	\$178.50
Model FW	1795	\$179.50
Model FX	1805	\$180.50
Model FY	1815	\$181.50
Model FZ	1825	\$182.50
Model GA	1835	\$183.50
Model GB	1845	\$184.50
Model GC	1855	\$185.50
Model GD	1865	\$186.50
Model GE	1875	\$187.50
Model GF	1885	\$188.50
Model GG	1895	\$189.50
Model GH	1905	\$190.50
Model GI	1915	\$191.50
Model GJ	1925	\$192.50
Model GK	1935	\$193.50
Model GL	1945	\$194.50
Model GM	1955	\$195.50
Model GN	1965	\$196.50
Model GO	1975	\$197.50
Model GP	1985	\$198.50
Model GQ	1995	\$199.50
Model GR	2005	\$200.50
Model GS	2015	\$201.50
Model GT	2025	\$202.50
Model GU	2035	\$203.50
Model GV	2045	\$204.50
Model GW	2055	\$205.50
Model GX	2065	\$206.50
Model GY	2075	\$207.50
Model GZ	2085	\$208.50
Model HA	2095	\$209.50
Model HB	2105	\$210.50
Model HC	2115	\$211.50
Model HD	2125	\$212.50
Model HE	2135	\$213.50
Model HF	2145	\$214.50
Model HG	2155	\$215.50
Model HH	2165	\$216.50
Model HI	2175	\$217.50
Model HJ	2185	\$218.50
Model HK	2195	\$219.50
Model HL	2205	\$220.50
Model HM	2215	\$221.50
Model HN	2225	\$222.50
Model HO	2235	\$223.50
Model HP	2245	\$224.50
Model HQ	2255	\$225.50
Model HR	2265	\$226.50
Model HS	2275	\$227.50
Model HT	2285	\$228.50
Model HU	2295	\$229.50
Model HV	2305	\$230.50
Model HW	2315	\$231.50
Model HX	2325	\$232.50
Model HY	2335	\$233.50
Model HZ	2345	\$234.50
Model IA	2355	\$235.50
Model IB	2365	\$236.50
Model IC	2375	\$237.50
Model ID	2385	\$238.50
Model IE	2395	\$239.50
Model IF	2405	\$240.50
Model IG	2415	\$241.50
Model IH	2425	\$242.50
Model II	2435	\$243.50
Model IJ	2445	\$244.50
Model IK	2455	\$245.50
Model IL	2465	\$246.50
Model IM	2475	\$247.50
Model IN	2485	\$248.50
Model IO	2495	\$249.50
Model IP	2505	\$250.50
Model IQ	2515	\$251.50
Model IR	2525	\$252.50
Model IS	2535	\$253.50
Model IT	2545	\$254.50
Model IU	2555	\$255.50
Model IV	2565	\$256.50
Model IW	2575	\$257.50
Model IX	2585	\$258.50
Model IY	2595	\$259.50
Model IZ	2605	\$260.50
Model JA	2615	\$261.50
Model JB	2625	\$262.50
Model JC	2635	\$263.50
Model JD	2645	\$264.50
Model JE	2655	\$265.50
Model JF	2665	\$266.50
Model JG	2675	\$267.50
Model JH	2685	\$268.50
Model JI	2695	\$269.50
Model JJ	2705	\$270.50
Model JK	2715	\$271.50
Model JL	2725	\$272.50
Model JM	2735	\$273.50
Model JN	2745	\$274.50
Model JO	2755	\$275.50
Model JP	2765	\$276.50
Model JQ	2775	\$277.50
Model JR	2785	\$278.50
Model JS	2795	\$279.50
Model JT	2805	\$280.50
Model JU	2815	\$281.50
Model JV	2825	\$282.50
Model JW	2835	\$283.50
Model JX	2845	\$284.50
Model JY	2855	\$285.50
Model JZ	2865	\$286.50
Model KA	2875	\$287.50
Model KB	2885	\$288.50
Model KC	2895	\$289.50
Model KD	2905	\$290.50
Model KE	2915	\$291.50
Model KF	2925	\$292.50
Model KG	2935	\$293.50
Model KH	2945	\$294.50
Model KI	2955	\$295.50
Model KJ	2965	\$296.50
Model KK	2975	\$297.50
Model KL	2985	\$298.50
Model KM	2995	\$299.50
Model KN	3005	\$300.50
Model KO	3015	\$301.50
Model KP	3025	\$302.50
Model KQ	3035	\$303.50
Model KR	3045	\$304.50
Model KS	3055	\$305.50
Model KT	3065	\$306.50
Model KU	3075	\$307.50
Model KV	3085	\$308.50
Model KW	3095	\$309.50
Model KX	3105	\$310.50
Model KY	3115	\$311.50
Model KZ	3125	\$312.50
Model LA	3135	\$313.50
Model LB	3145	\$314.50
Model LC	3155	\$315.50
Model LD	3165	\$316.50
Model LE	3175	\$317.50
Model LF	3185	\$318.50
Model LG	3195	\$319.50
Model LH	3205	\$320.50
Model LI	3215	\$321.50
Model LJ	3225	\$322.50
Model LK	3235	\$323.50
Model LL	3245</	

20-year user in Nebraska

# Chooses **ARO** REELS for New Building Lubritorium!



J. Wallace deBrown, Owner

"We have been using ARO Lubricating Equipment for over 20 years," says J. Wallace deBrown, owner of DeBrown Auto Sales Company, Lincoln, Nebraska. "When we were building our new building we looked over and checked into all makes of Lubricating Equipment. Our decision to buy ARO was formed after due consideration was given to our entire satisfaction with Aro's performance over many years.

"We are especially pleased with our remote Undercoating Pump to Reels. It was my personal desire that our new Lubritorium be free of any pumping equipment on our Lube room floor, hence ARO engineered the remote handling of our Undercoating problem to our entire satisfaction. I personally want to thank you for your splendid cooperation with your good assistance in laying out our new lubritorium."

This is typical of the way ARO lube equipment makes friends everywhere—and *profits* for users! Let ARO help you with your lube service problems.

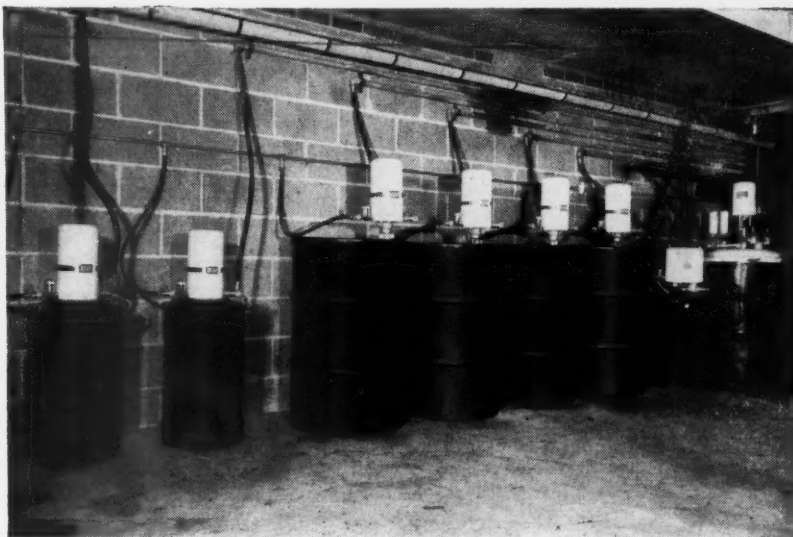
SEE YOUR ARO JOBBER



Modern new home of DeBrown Auto Sales Company, Lincoln, Nebraska



Aro overhead reels, wall cabinet and portable drain provide fast, clean lube and undercoating service.



Aro pumping units do an efficient job in remote location.

THE ARO EQUIPMENT CORPORATION, Bryan and Cleveland, Ohio

Aro Equipment of California, Los Angeles, Calif.

Aro Equipment of Canada, Ltd., Toronto 15, Ontario. Offices in All Principal Cities



**LUBE EQUIPMENT**

ALSO ... AIR TOOLS ... AIRCRAFT  
PRODUCTS ... GREASE FITTINGS



# *The best* BEARING MARKET

**A**lmost half the cars and trucks that pass your door are built with Moraine engine bearings as original equipment. Sell where the selling is easiest—replace with Moraine engine bearings.

Moraine engine bearings are original equipment on more new cars and trucks than any other make—including all General Motors cars and trucks! It's a ready-made replacement market, a great selling opportunity for you!

Modern automobile engines are built to higher and higher compression ratios to provide better all-around performance. And Moraine's M-100 (Durex) engine bearings lead in this expanding original equipment field. The M-100—built by the world's largest manufacturer of original equipment engine bearings—was especially developed for modern engines, designed to give greater durability and longer life through an exclusive Moraine engineering process.

All Moraine bearings—both the M-100 and the conventional steel-backed babbitt-type bearings—are built to uniform high quality, to the exacting tolerances that original equipment manufacturers demand. For 1955 United Motors offers a complete line of replacement bearings to fit all cars.

*Important bearing news!* Moraine-400—toughest automotive bearing ever made—is original equipment in 1955 models of representative cars, trucks, buses and off-the-road vehicles.

A GENERAL MOTORS PRODUCT   A UNITED MOTORS LINE

**DISTRIBUTED BY WHOLESALERS EVERYWHERE**



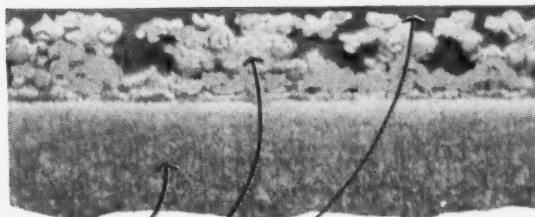
you have is the  
**READY-MADE** market for

# MORaine

## ENGINE BEARINGS



Moraine engine bearings are attractively packaged, easily identified on your shelves.



STEEL  
 MATRIX  
 BABBITT

Photo-Micrograph of Cross Section of M-100 Bearing, Magnified 33 Times

### THE MATRIX MAKES THE DIFFERENCE

Steel-backed intermediate matrix, of porous copper-nickel, bonds mechanically, as well as metallurgically, with high-lead babbitt having a thin overlay.

The exclusive Moraine matrix (or middle layer) supporting the babbitt and bonded to the steel back makes the M-100 8 Ways Better!

- 1 Greater resistance to fatigue
- 2 Increased load carrying capacity
- 3 Greater conformability
- 4 Greater embedability
- 5 Stronger bond
- 6 Greater resistance to scoring
- 7 Greater resistance to corrosion
- 8 More durability



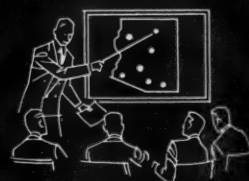
1912. Started work for Arizona Eastern Railroad at Phoenix, Arizona.



1918. Became jobber salesman for Motor Supply Co., Phoenix.



1936. Became Vice President and Sales Manager, Motor Supply Co. Sales in 1936 — \$485,000.00.



Today, Motor Supply has 6 branch stores, 85 employees, with sales over \$2,000,000.00.

*J. L. McCoy*

Vice President

MOTOR SUPPLY CO.  
PHOENIX, ARIZONA





"I've been in this business for thirty-seven years," says Mr. McCoy, "and every one of those years has confirmed my basic ideas about the lines we handle. We sell products that give value to the car owner and sound profit to our house and our dealers. Another thing we look for is strong national advertising and smart promotion. We get all that from the Auto-Lite Battery line plus the exceptional benefits of the premium Sta-ful Battery that needs water only 3 times a year."

# **AUTO-LITE**

## **BATTERIES**

*The Industry's  
Leading Jobbers  
Rely on .....  
Leading Lines*



# "THESE NEW HIGH HORSEPOWER ENGINES ARE TOUGH TO QUIET!"

*Excerpts from the Notebook on Walker Silencers  
by the late Wilbur Shaw,*

*President of the Indianapolis Motor Speedway 1946-54,  
and 3-Time Winner of the 500-Mile Classic.*

"Exhaust noise is like a crazy kid banging a lot of notes on a piano. It isn't music . . . it's noise."

"Engines make all kinds of noises, too. The more powerful the engine, the tougher the noise is to quiet."

"Shell and pipe noise are especially difficult to control on new high horsepower engines. It usually requires specially treated shells to lick this problem. In the Walker line are 76 double-wrapped shells and 36 asbestos

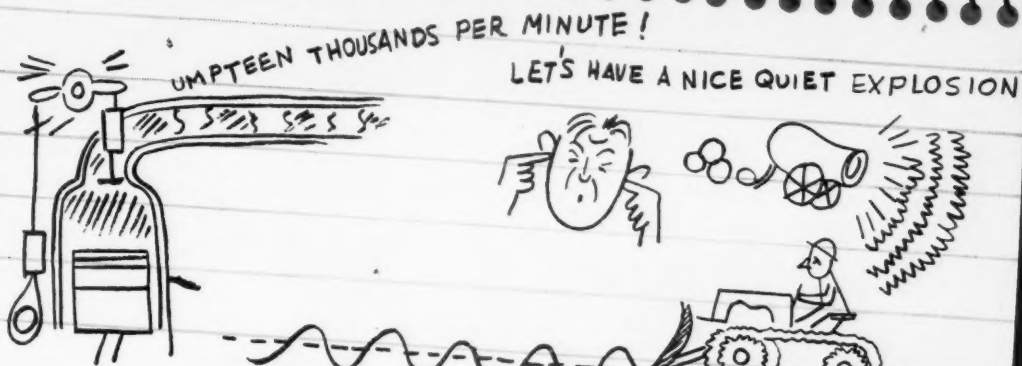
*treated shells for the real tough babies."*

"In the Walker laboratories the most modern electronic sound analyzing equipment enables their engineers to design Walker Silencers that are 'right on the button' for sound control . . . including those real 'toughies'—roughness and deceleration noise."

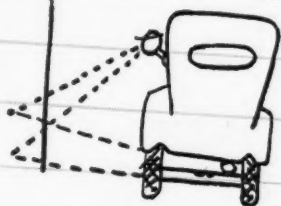
"It's amazing what Walker engineers know about exhaust noises . . . and what to do to get rid of them. 'New-car-quietness' is the Walker slogan."



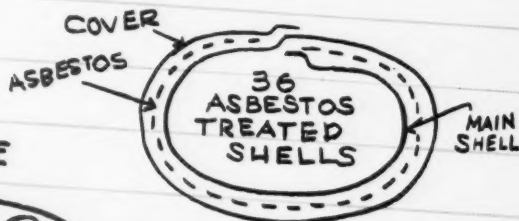
"Listening to sound in 3-D. This new *Binaural* sound recording equipment is part of Walker's elaborate electronic instrument set-up for accurately analyzing exhaust sounds. They certainly have the equipment and technical 'know-how' to tackle any exhaust problem."



WALKER PRECISION TUNING CUTS OFF THE PEAKS  
FILLS THE VALLEYS—LEVELS THE SOUND



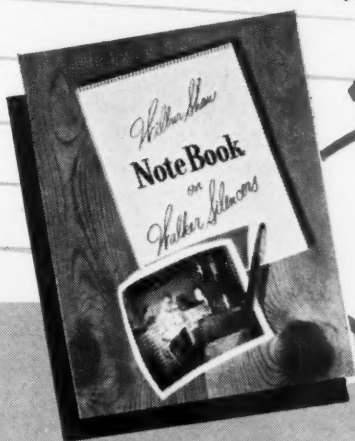
SHELL NOISES—WALKER WHIPS 'EM!



MORE HORSEPOWER—MORE NOISE



RACING CAR ROAR IS FINE—ON THE SPEEDWAY!  
BUT THE DRIVERS STUFF COTTON IN THEIR EARS!



### GET YOUR COPY

of the "Wilbur Shaw Notebook on Walker Silencers" from your jobber or by writing to Walker Manufacturing Company, Racine, Wisconsin. This factual exhaust system report was prepared by Shaw shortly before his untimely death.



# WALKER *Precision Tuned* SILENCERS

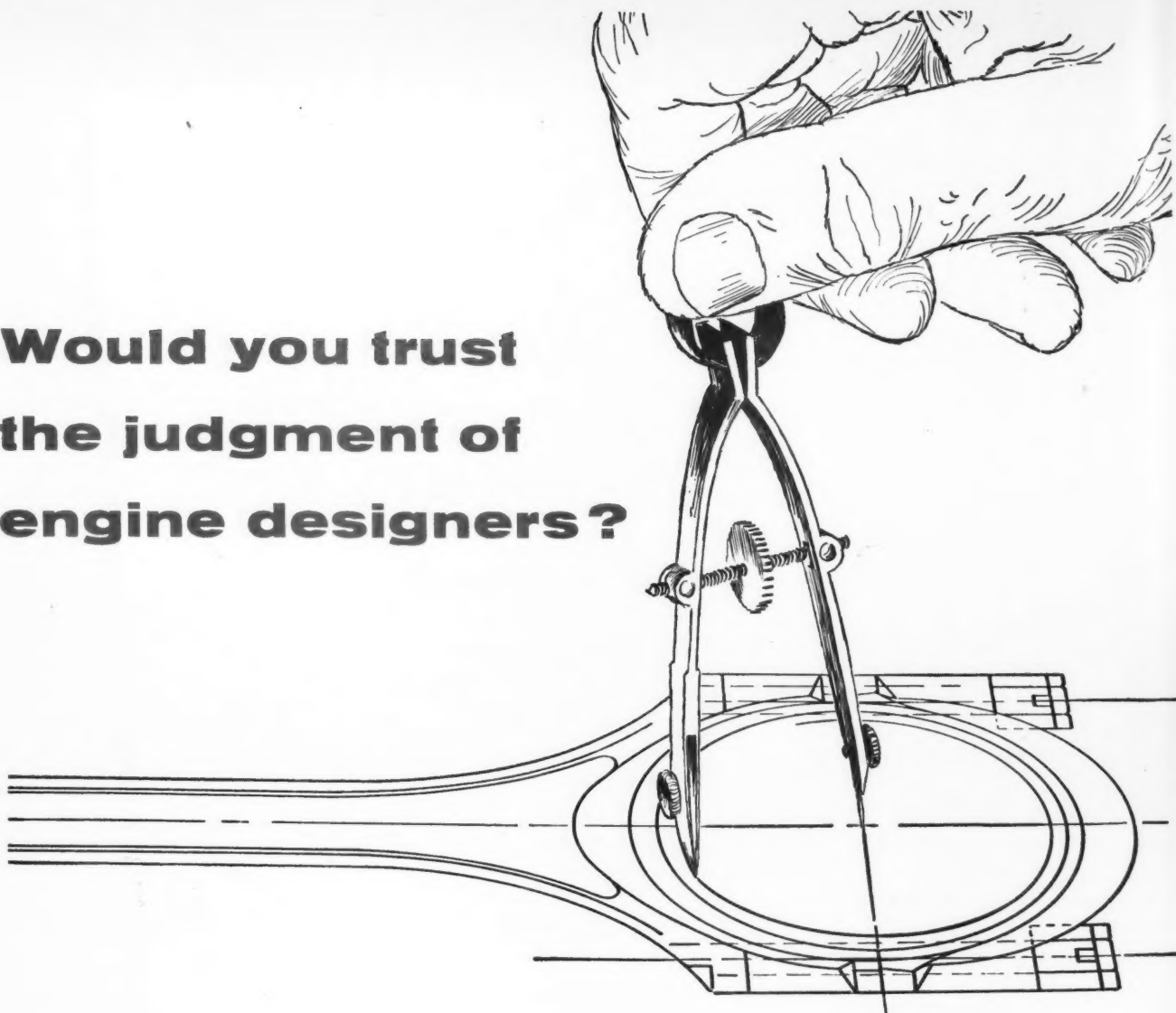
"..SURE DO BRING OUT THE GO FACTOR!"

WALKER MANUFACTURING CO. OF WISCONSIN • RACINE, WISCONSIN

EXHAUST SILENCERS • OIL FILTERS • JACKS



**Would you trust  
the judgment of  
engine designers?**



**YOU** can bet your bottom dollar that engine designers know what they are doing when they specify bearings.

That's why *Monmouth*\* *Clevite*\* 77's are designed into more high-duty engines than any others. In fact, we build most of the original equipment bearings for internal combustion engines of all types!

If you respect the judgment of the men who designed your engines, you'll want to install *Clevite 77* bearings when you tear down for overhauls.

These heavy-duty bearings will outlast all others.

Reports from fleet and commercial operators show bearings *still* good after 250,000 miles of severe service. Some report even *higher* mileages!

The secret of this long mileage is in the high fatigue resistance designed into *Clevite 77* bearings . . . and in the precision fit.

And the method of building this high-duty bearing is exclusively *Clevite's*!

Why not test a set of these bearings next time you tear down an engine? Your nearby N.A.P.A. jobber has the exact size needed for any engine.

\*The words *Monmouth*, *Clevite* and *Micro* are registered trade marks of *Clevite Corporation*.

**Monmouth**  
TRADE MARK  
**ENGINE BEARINGS**

Clevite Service  
The Cleveland Graphite Bronze Co.  
Division of *Clevite Corporation*, Cleveland, Ohio, U. S. A.



*Your  
NAPA Jobber  
is a Good Man  
to Know!*

# There's a **BIG FOUR** model to fit your **TUBELESS** tire servicing need!



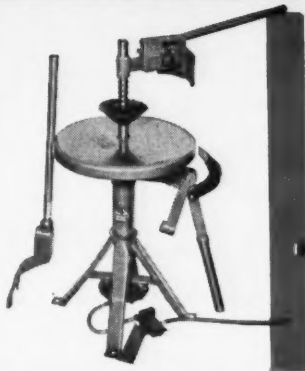
**THE HENDERSON SUPER MODEL AF**

Includes all advanced features: Foot Valve controls the Air Powered Wheel Lock . . . permitting use of Wheel Balancer. Complete with patented double bead breaker, tire mounting and demounting tools. Price **\$179.00**, slightly higher West of Denver.



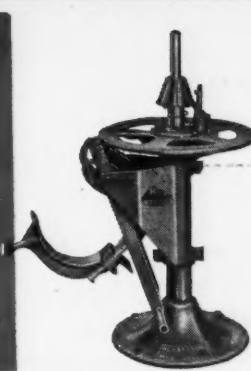
**THE HENDERSON SUPER MODEL A**

Wheel lock valve is located in center post . . . air chuck and push button controlled. Complete with patented double bead breaker, tire mounting and demounting tools. Price **\$175.00**, slightly higher West of Denver.



**THE HENDERSON STANDARD MODEL BF**

Features air powered wheel lock with Foot Pedal control . . . permitting use of Wheel Balancer. Includes single two way bead breaker, tire mounting and demounting tools. Price **\$119.00**, slightly higher West of Denver.



**THE HENDERSON MODEL I**

Completely equipped with patented double bead breaker, tire mounting and demounting tools. Positive automatic spring loaded centering device. Wheel lock is hand-operated. Price **\$189.00**, slightly higher West of Denver.

(Manufactured under one or more of the following patents: 2,534,515; 2,609,038; 2,609,039; 2,655,985; 2,481,926; 2,164,171. Other U. S. and foreign patents pending.)

## NOW! HENDERSON TIRE CHANGER BALANCES WHEELS, TOO!

### One Machine Performs Two Vital Jobs!

As soon as tire is serviced, Balancer starts to work. Automatically positions itself, grips rim of wheel. Touching foot valve suspends tire-wheel assembly for easy balancing. Indicator Dial on top shows even slightest "out of balance." When wheel weights are distributed about tire, car owner can easily see why "out of balance" condition should be corrected. Touching foot valve again, returns wheel and tire to table. Weights can then be attached without shock to Balancer. Big Four's amazing new Balancer attachment eliminates sales resistance to balancing jobs . . . pays for itself out of extra business it brings in!



(Balancer attachment.  
**\$49.50.**)

Big Four's Roll-Easy Base is available for all Henderson Tire Changer models. Makes it easy to move tire changer in a hurry, wherever needed. Extra large 48" Dia. base means greater stability, safer operation.

### SEE BIG 4's COMPLETE LINE OF TUBELESS TIRE EQUIPMENT!



Big Four's Henderson Tire Spreader and Tool Rack, No. 300-S, add more ease, more profit to servicing tubeless tires and safety tubes. Tire Spreader makes inspection and repair sure, complete.



Big Four's Bead Expander, Model No. 400, makes inflating tubeless tires a breeze. Expander compresses tubeless tire crown equally around entire circumference and holds beads of tire firmly against the bead seats of rim.

**BIG FOUR**  
INDUSTRIES, INCORPORATED  
CINCINNATI 12, OHIO

I am interested in free demonstration of:

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

All Big Four Equipment is either patented or patents pending.

**OVERSEAS DIVISION**—276 West 43rd Street, New York 36, New York  
**CANADIAN DIVISION**—Canada Vulcanizer & Equipment Co., Ltd. London, Ontario

Chilton's MOTOR AGE, May, 1955

What makes customers come back for more?



They'll all come back if you give 'em the best. When it's a bearing job... *just tell 'em it's TIMKEN!*

Detour 'em—that's one way to get cars into your shop. But it doesn't mean customers. Next time, they'll take a different route. There's only one sure way to keep old customers, and make new ones: convince them you give the best service. Show them you use nothing but the finest replacement parts. In tapered roller bearings, you want them

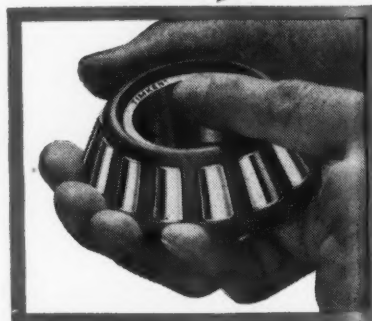
to know you use *Timken*® bearings, the one name your customers associate with *quality*. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ont. Cable: "TIMROSCO".

**TIMKEN**

TRADE MARK REG. U. S. PAT. OFF.

**TAPERED ROLLER BEARINGS**

NOT JUST A BALL ○ NOT JUST A ROLLER □ THE TIMKEN TAPERED ROLLER □ BEARING TAKES RADIAL ○ AND THRUST — ○ — LOADS OR ANY COMBINATION ☼





**"See For Yourself How**

**LION**

**Nōkōrōde**

**UNDERCAR SEALER  
AND SILENCER**

- ✓ **Sprays on Quicker**
- ✓ **Saves Time,  
Trouble, Money!"**

**50% More Undercoating  
Jobs from Every Drum**

Check these facts, and you'll quickly see how Lion Nokorode Undercar Sealer and Silencer can build *extra* profits for you. Nokorode . . .

- **Is sprayed on thinner ( $\frac{1}{16}$ " )**
- **Dries faster**
- **Lasts longer**
- **Goes farther**
- **Is concentrated**
- **Is preferred by spray men, because both application and clean-up are easier**
- **Is guaranteed by Lion Oil Company**

*Made under the process of U. S. Patent No. 2393774, and made from start to finish by Lion Oil Company. Send for complete details NOW!*



**LION OIL COMPANY**  
**EL DORADO, ARKANSAS**



Lion Oil Company  
Dept. MA-E  
El Dorado, Arkansas

Please send me complete information about Lion Nokorode, and how it can increase underbody coating profits. No obligation, of course.

Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

# Blue Streak Ignition is better for your business

39,000 top ignition men agree: Blue Streak ignition parts are sturdier; they last for more miles than you imagine they should; their performance and long life have a way of making your customer tell his friends, "Great mechanic that Joe". For an example of how we build your "reputation insurance" into our parts, take a look at the heavy-duty construction of the **BLUE STREAK CONDENSER**

## **HERMETICALLY SEALED**

Tight as a diver's helmet. (Eliminates the possibility of any moisture entering the condenser and affecting the winding.)

## **ELECTRONIC SOLDERING**

For secure electrical connections. (Eliminates the hazards of imperfect, internal pressure type connections.)

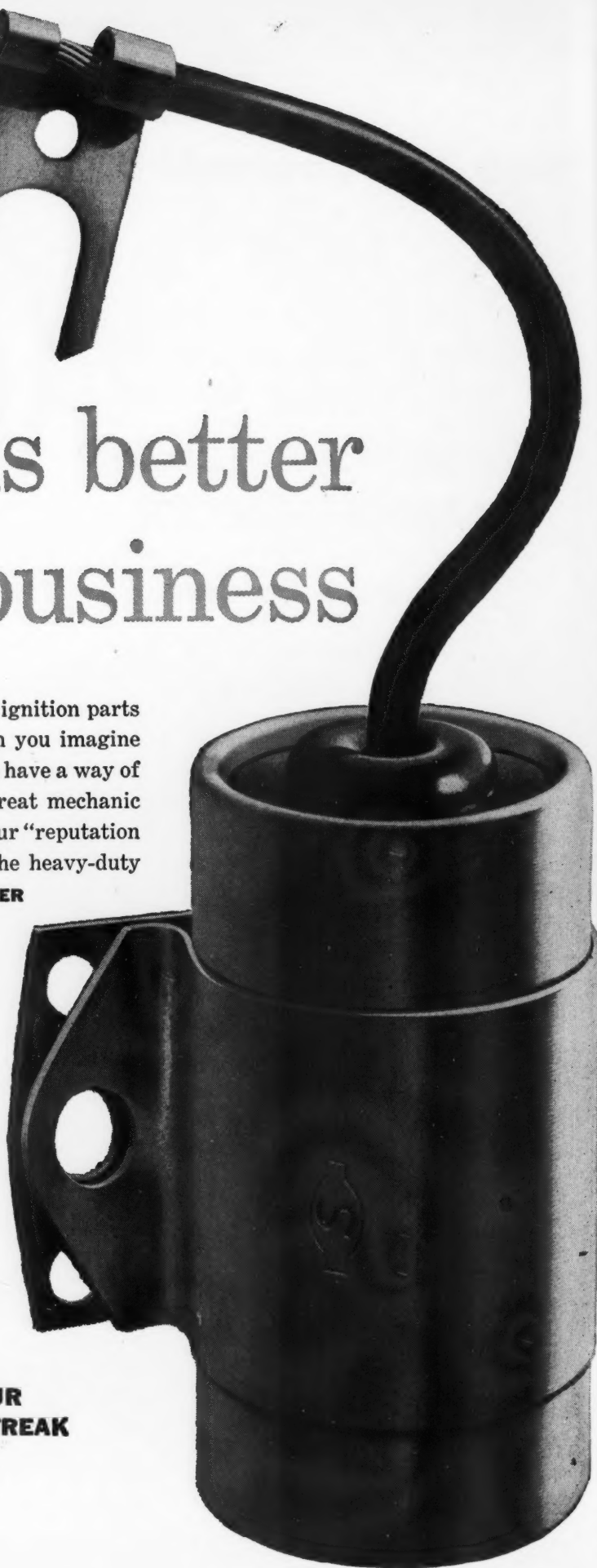
## **1000 VOLT TESTED**

To insure the effectiveness of the insulation. (On your customer's car 250 volts is tops. So Blue Streak gives you 300% safety margin.)



**SEE YOUR  
BLUE STREAK  
JOBBER**

**STANDARD MOTOR PRODUCTS, INC.**  
Long Island City 1, New York





Top farmers like Edgar Bodman use machinery instead of muscles to step up profits.

## Better farming makes him a better customer for you!

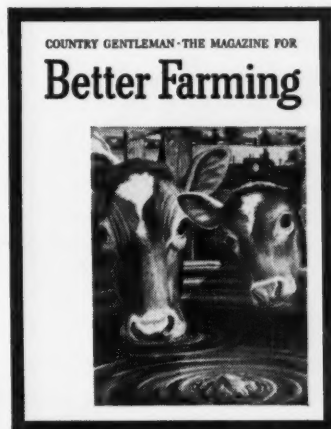
With the better farming tools within his reach, the average farmer can boost his net income by 25%.

Our job is to inspire farmers to reach this better farming goal—to keep top farmers abreast of the newest and best. This makes more customers for you. For what you sell is needed for better farming.

Better farming on more farms . . . more sales to more prosperous farmers—that's what *Better Farming* means!

Now Country Gentleman's name  
and aim are the same

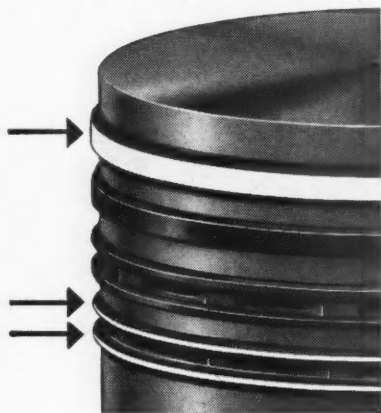
A Curtis publication



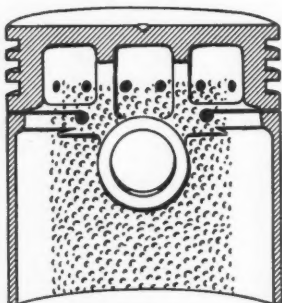


# Smoother performance

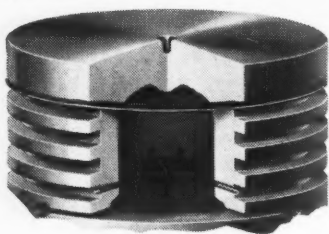
**EVERY RE-RING JOB  
DESERVES ALL THREE...**



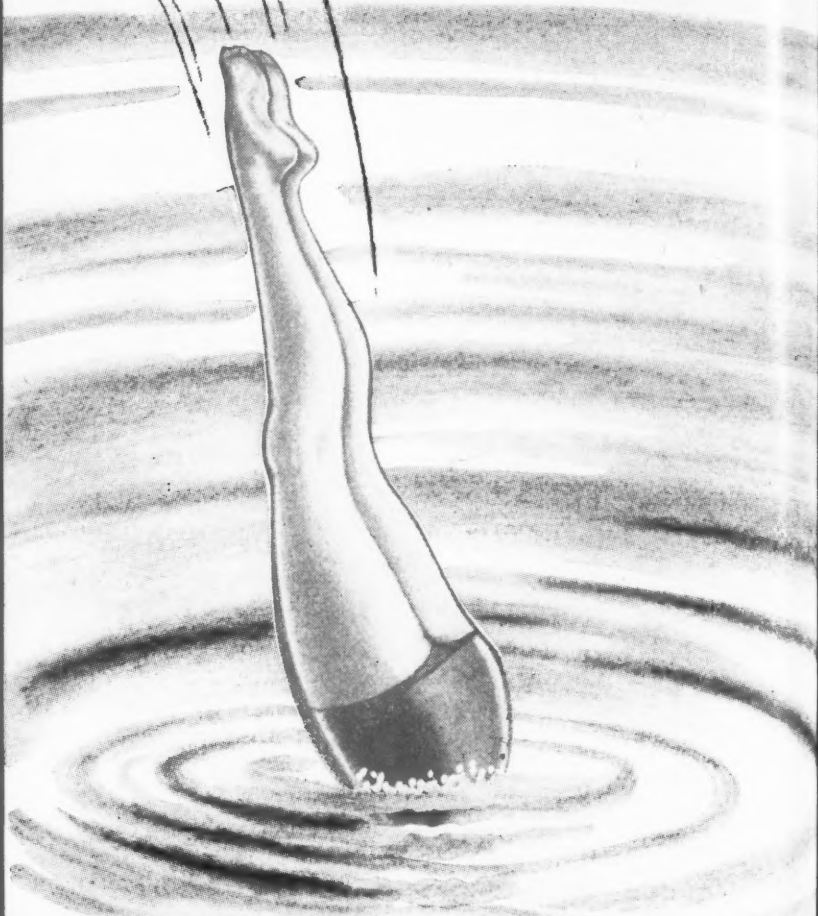
1. KromeX Ring Sets are the most economical, measured by miles. Factory-seated for instant oil control—chrome-faced top ring and oil ring side rails for longest wear.



2. Sealed Power SUPER-SIZER is the world's best resizing method, increases resiliency and outward tension on thrust faces, expands skirt to original close fit, leaves piston skirt surface smooth.



3. Sealed Power GI-60 Groove Insert is the only dependable, economical method of restoring top groove to original size and protecting against future wear.



## Sealed Power KromeX

### PISTON RING SETS...

*assure your customer*

- smoother performance
- faster pick-up
- double ring life
- maximum oil economy
- positive lubrication

*assure YOURSELF*

- better-satisfied customers
- more new customers
- no come-backs

SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

## Sealed Power Piston Rings

**BEST FOR RE-RING!**

**BEST FOR RE-BORE!**

RINGS • PISTONS • PINS • SLEEVES • VALVES • WATER PUMPS

# Newscoop

Production is booming  
Car—Shop ratio  
Pontiac wags a finger  
An "E" in Ford's future  
New light in 39 states  
Zone of repair period  
Torsion bars on a Big 3

## The Boom Shatters Records

AUTOMOBILE PRODUCTION RECORDS tumble week by week for both industry and individual companies as the amazing new car boom continues. The weekly production peak of more than 180,000 cars is at an annual rate of nearly 9.5 million.

SOME COMPANIES HAD BUILT MORE 1955 CARS before the end of April than the total 1954 model run. The latest estimates are for sales this year of 6.5 to 6.6 million cars.

## More Cars Per Shop

THE BIG BULGE IN THE CAR POPULATION without corresponding increase in service shops means dealers and independent repair shops can look ahead to greatly expanded business in the next five years.

THE NUMBER OF REPAIR ESTABLISHMENTS in 1945 was nearly 82,000, compared with 122,038 at end of 1954, an increase of about 50 per cent. Cars in use in that period jumped 90 per cent.

## Pontiac Speaks Up On Repainting

THE PONTIAC WARNING TO DEALERS on repainting cars is important because of the widespread trend to refinish new cars to customer's order at the dealership.

PONTIAC SAYS THE FACTORY FINISH provides maximum thickness, which should not be exceeded in repainting. It says the original color coat should be sanded or stripped down before repainting to prevent cracking, peeling and so on.

IT ALSO RECOMMENDS SEALER if the original color is a "bleeder," and either removing moldings or using extreme care to prevent bridging (between panels and moldings) which fractures easily and causes peeling or flaking.

## S-P in Black for March—Sales Up 70%

FIRST FINANCIAL BENEFITS of the Studebaker-Packard merger were achieved in March, when the corporation revealed that it earned a profit that month for the first time since the corporation was organized last October.

ALTHOUGH NOT CITING ANY FIGURES, the corporation reported that sale of Packard and Studebaker cars was up more than 70 per cent in the first quarter over the same three months last year.

## "E" Car May Be in the Works

SEPARATION OF LINCOLN AND MERCURY divisions by Ford and revival of a Special Products division strongly bolsters reports of a new car line coming at Ford Motor Co.

TENTATIVELY DESIGNATED THE "E" CAR (perhaps for Edsel Ford) it would fall into the gap between Mercury and Lincoln. A good possibility is three basic bodies, to spread over four or five lines, plus the Continental.

## GM Patents Automatic Choke

GENERAL MOTORS HAS NOT INDICATED whether it would enforce its rights to the automatic choke, for which it was granted a basic patent in April after 23 years.

ALTHOUGH GM CANNOT CLAIM INFRINGEMENT prior to April 5, when it was granted the patent, it may do so any time during the next 17 years. After that period the patent becomes public domain.

SINCE THE APPLICATION WAS FIRST FILED, the case has been involved in numerous interference proceedings by other manufacturers and inventors.

## K-W Shows Profit

THINGS ARE LOOKING UP for Kaiser-Willys. After a hefty \$35.4 million loss last year Kaiser Motors came up with a profit of \$1.2 million for the first three months of this year.

WILLYS IS SHIFTING HEAVILY to utility and commercial vehicles, away from passenger cars. A good bet is that Willys will get out of the passenger car business when present tooling is no longer usable.

## OTHER NEWS ITEMS

SALE OF THE NEW IMPROVED SEALED-BEAM headlight will be legal in 39 states and the District of Columbia after July 4. All these states have approved the new light by legislation or other means.

★ ★ ★

CAR MAKERS THINK THE "ZONE OF REPAIR" PERIOD, in which car owners go back to the original dealers for service or parts, may be getting longer. Their reason is that major jobs such as valve grinds come at much higher mileage also a larger percentage of business is accident work in which the dealer is the source of replacement parts.

★ ★ ★

CHEVROLET HAS ADDED SEVERAL MORE COLORS to its present line of hues for cars. New colors include Cashmere Blue, and combinations of India Ivory with Cashmere Blue or Navajo Tan or Dusk Rose.

THREE COLORS ARE OFFERED on the Corvette. They are Harvest Gold, Gypsy Rose and Bronze.

★ ★ ★

PRICES ANNOUNCED BY DODGE for the 1955 line of trucks indicate an average increase of approximately 3½ per cent over 1954 models. Ford, GMC and Chevrolet announced prices on their new trucks earlier, with increases averaging 3.2, 2 to 5 and 6.5 per cent respectively.



TORSION BAR SUSPENSION IS REPORTED to be a likely prospect in one of the Big Three volume lines in 1957 models. It would not, however, include a leveling device such as is currently being used by Packard.

★ ★ ★

THE HEAVY INCREASE IN NEW CAR PREPARATION and warranty work is heavily over-taxing some dealer shops. One of the Big Three is urging its dealers to set up car preparation and warranty operations in low cost facilities away from the dealership.

★ ★ ★

GENERAL MOTORS IS KICKING OFF intensive used car reconditioning clinics for dealer personnel at 28 training centers across the country.

THE TWO-DAY CLINICS, in addition to usual procedures, will feature new low cost plastic method of metal repair and new equipment for polishing and removing scratches from windshields.

★ ★ ★

MOPAR HAS REORGANIZED ITS FIELD OPERATIONS for more efficient performance at the dealer level. Mopar field men, working with dealers on retail functions, are assigned to individual car divisions and will work exclusively with that division's dealers.

★ ★ ★

THE TREND TO 14 INCH WHEELS in cars, mentioned here last month, now definitely appears due in 1957 or earlier. An unconfirmed report says a large producer in the Big Three may offer 14 inch wheels on some 1956 models.

★ ★ ★

FOUR-DOOR HARDTOP MODELS apparently are going to sweep through the automobile industry next year. Buick and Oldsmobile (only makers of these models) now find them very popular. All of the Big Three will have 4-door hardtops next year.

## Washington Wire.....by Ray M. Stroupe



THE FEDERAL TRADE COMMISSION is making no moves that indicate a serious intent to break up any of the Big Three auto producers.

EARLIER THIS YEAR, Chairman Howrey of FTC hinted he'd like to see less power in the hands of the big producers. A new law would be needed by FTC to cut down the holdings of these companies.

### Dealers Aroused Over "Wage" Bill

NEW CAR AND TRUCK RETAILERS "vigorously oppose" extension of the Federal wage and hour coverage to retail and service establishments. The National Automobile Dealers Association stated this, recently, to the Senate subcommittee on Labor and Public welfare.

NADA GENERAL COUNCIL, James C. Moore appeared in opposition to two Senate bills to extend coverage of the Fair Labor Standards Act to retail automobile dealers doing a gross annual business of more than \$500,000.

## "Slow Down"—"Partners"

TWO HIGHWAY SAFETY PROGRAMS are being set up to run nationally from the Memorial Day weekend to Labor Day. One is the "Slow Down and Live" campaign, sponsored last year by 24 state governors. The other is the "Partners in Safety" drive, to be launched from Washington by the American Trucking Associations, Inc.

★ ★ ★

A BILL HAS BEEN INTRODUCED in Washington to eliminate excise taxes on cars which dealers donate to schools for driver training courses. Under the proposal, dealers who supply a training car for three months or more without charge would be exempted from paying the tax.

A MANUFACTURER WOULD HAVE TO PROVE that tax was not included in the dealer's price for the car and that he has paid the dealer \$100 to help refurbish the car after the school returns it.

## Builds More Support for 'Phantom' Bill

DELAY BY THE HOUSE COMMERCE COMMITTEE in setting hearings on the Hinshaw phantom freight bill (H.R. 528) has advantages for the National Automobile Dealers Association. The association is making good use of its extra time to prepare strong testimony supporting the bill.

★ ★ ★

FINDING EXACTLY THE RIGHT WORDING for a new antibootlegging bill is a current task of the National Automobile Dealers Association. NADA expects no trouble in getting the bill presented in Congress. What the association wants to be sure of is that the wording will stand up if tested in court.

★ ★ ★

NEW MEMBER OF THE INTER-INDUSTRY HIGHWAY SAFETY COMMITTEE is Walter B. Cooper, an auto dealer in Fort Collins, Colorado. Mr. Cooper is chairman of the national affairs committee of the National Automobile Dealers Association.

## Complete and Accurate—or Else

BUSINESSMEN ARE CAUTIONED to give the United States Bureau what is asked for on the business census forms mailed out early this year. The law requires that details sent to bureau be full and correct. Failure to return a completed form can mean a \$500 fine, or 90 days in jail, or both.

★ ★ ★

JOSEPH W. ESKRIDGE, who entered the automobile business in 1919, is the new director of the Automotive Division, Business and Defense Service Administration. He is on loan to BDSA from his job as vice president in charge of manufacturing, Hudson Special Products Division, American Motors Corp.

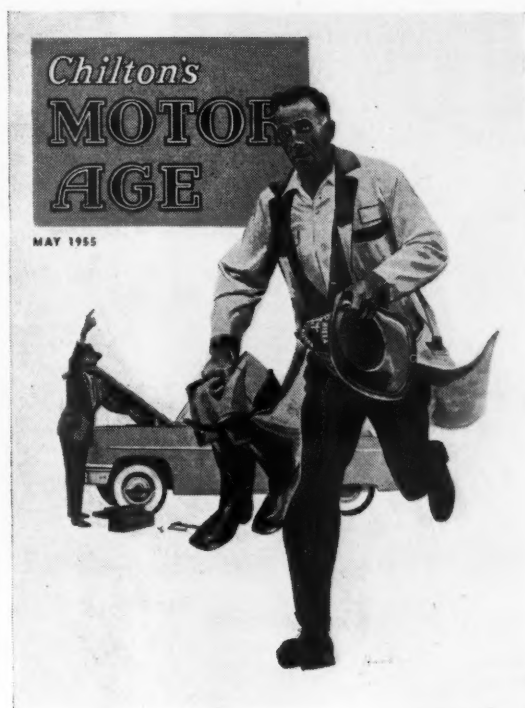
★ ★ ★

SOME MONTHS MAY GO BY before the U. S. Census Bureau has complete results of its sample survey of used car stocks. Cars included in the survey are to be those not already reported to industry. The present problem is to find which cars are so reported and to omit them from the count.

# Report to Our Readers



## Win the Original of this Painting



**T**HIS REPRODUCTION was made from the artist's original painting of the current cover of MOTOR AGE. You have an opportunity to win it.

There are no entry fees . . . nothing to buy . . . no strings attached.

All that you need do is write a letter on your business stationery telling the editors of MOTOR AGE—"What I liked best about this, the May issue of MOTOR AGE"—sign your name and title.

The contest is open to all readers of MOTOR AGE excepting employees of the Chilton Company, publishers of this magazine.

The full color painting is a large illustration measuring 16½ x 22 inches. It will be delivered

to the writer of the winning letter suitably framed for hanging in his place of business, his office, his den or game room.

Many readers have asked for reproductions of our covers and have shown great interest in the attractiveness of these illustrations in the months and years gone by.

This is the first time MOTOR AGE has ever offered to give these valuable paintings to its readers. Since we have thousands and thousands of readers, the only possible way to give these originals away would be to offer them in contest form.

Writing style, grammar, are not essential factors in winning the contest. It's your ideas, your thoughts on what you like best in this issue that will count. All letters will be judged fairly. All will become the property of the Chilton Company and none can be returned.

Final judgment of winning letters will be made by a selected panel of automotive experts and their decision will be final.

So, here's your opportunity. Write a letter to the editors answering this question—"What I liked best about this—the May issue of MOTOR AGE." The deadline for this current letter-writing contest will be June 25, 1955. The winner will be announced in the July issue of MOTOR AGE and the winning letter will be published therein.

This contest will be continued monthly until the end of 1955. The award being the original painting of the cover of each monthly issue of MOTOR AGE.

Let's hear from you.

Faithfully yours,

*Frank P. Tighe*

EDITOR



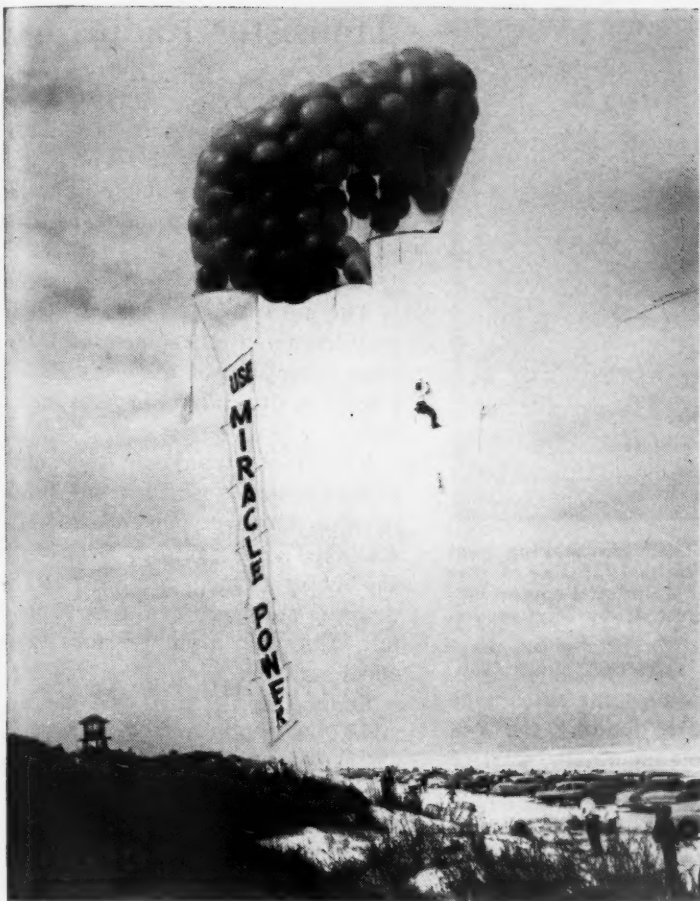


## NewsScene—

**"IT WAS QUITE AN ACCIDENT"**, Johnnie Warden, age 4, tells Patrolman J. W. Irwin. Johnnie was knocked off his tricycle in Nashville, Tenn., by a motorist who stopped long enough to hand him two dollars towards a new bike. Patrolman Irwin figured the deal needed a little legal review and put out an alert for the driver on a hit-and-run charge. When a community organization heard of Johnnie's plight, they soon bought him a new tricycle.

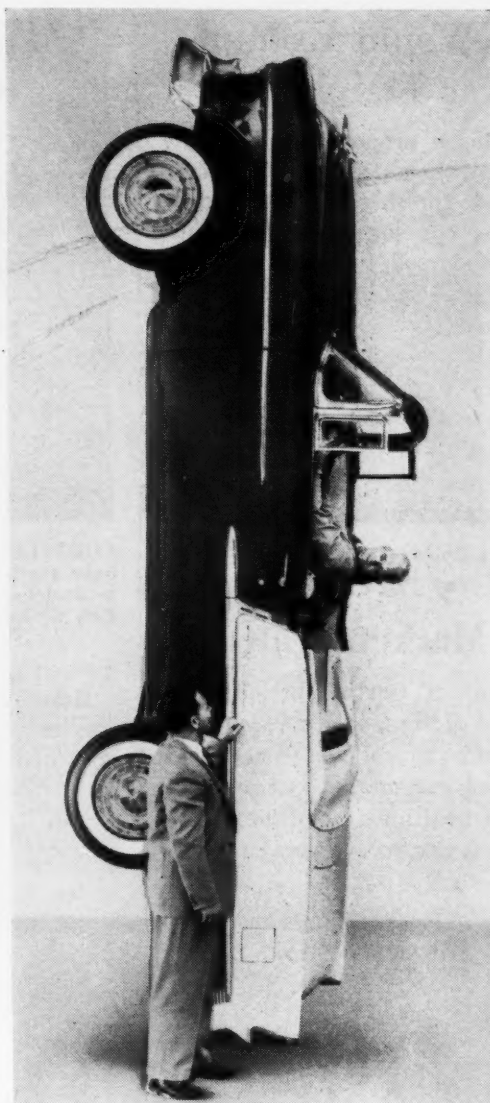
**RAMBLING ALONG** the highway as she nears Memphis, Tenn., is visitor from Minot, Me., Mrs. Anne Mabel Wilkins. With her two horses and her dog—named "Hurry Up"—she is continuing her trip to California which started five months and 1400 miles ago from her home. Mrs. Wilkins plans to arrive in Los Angeles this fall after her travels.





**EXPERIMENTAL BALLOONIST**, Garret Cashman, tried this rig recently to lift a Miracle Power banner high above the sands at Daytona Beach. Based on the idea of Cashman's original craft—a bunch of hydrogen inflated surplus weather balloons — this rig employed a nylon net to contain the balloons.

**FOX HUNTING WITH A TRUCK** went Bill Baylor to prove that a truck could keep up with the hounds in Bill's part of Virginia where the fields are rough and rolling. Soon after he got underway, Baylor in his Ford Pickup was clocking the horses in the open fields at 35 to 40 mph. When Baylor came to the jump he had fixed up, the truck sailed some 33 feet.



**BALANCING ACT** of the Chevrolet convertible illustrates the pencil-like design of new automobile models. Car was hoisted to its vertical position in an examination of the frame and under-carriage. To heighten effect, an engineer climbed into the driver's seat. Later the chain holding front end was touched out of photo.



## Bill Would Exempt Driver Training Car

A House proposal to eliminate automotive excise taxes on cars donated for high school driver training courses was enthusiastically endorsed today by the National Automobile Dealers Association.

The bill would exempt from the ten per cent manufacturers' excise tax all passenger cars slated for free use or youth training programs for not less than three months or more than one year.

## Curtice Says Used Car Market Healthy

Harlow H. Curtice, president of General Motors, told a recent GM Motorama press conference that the used car market currently is in "the healthiest condition since 1949" despite record breaking pro-



**CHRYSLER CORP.** is making seat belts available in its 1955 line of cars as dealer-installed optional equipment. Belt is demonstrated above by model.

duction and sales of new cars.

Asked if the new car sales pace was resulting in loading the lots with unsaleable used cars, Curtice estimated there was only a 24-day supply of used cars now in the hands of GM dealers.



**JOHN V. WALKER** (left), president, Walker Motor Sales, Inc., Dayton, Ohio, receives retailing's most coveted award—top honors in Brand Names Foundation's 1954 Brand Name Retailer-of-the-Year competition. Certificate of Distinction runner-up honors went to **Robert W. Braeger** (2nd from left), general manager, King Braeger Chevrolet Company, Milwaukee; **Lewis Boggus, Jr.** (center) secretary-treasurer, Lewis Boggus Motors, Inc., Corpus Christi; **Orville Lowe** (3rd from right), president, Orville Lowe, Inc., Des Moines; and **Messrs. Welter and McAnary** (at right) partners McAnary & Welter, Inc., Gary, Indiana. The five firms were among 119 in 24 categories of retailing honored for their presentation of manufacturers' advertised brands to the public during 1954.

## Transistor Radios For Chrysler Cars

The first completely transistorized automobile radio, which will be special equipment on Chrysler and Imperial lines of cars this fall, has been announced by E. C. Quinn, Chrysler Div. president.

The auto radio in which eleven tiny transistors replace all electron tubes will be made by Philco Corp. in its plant in Sandusky, Ohio.

The new transistorized auto radio requires less than one tenth of the battery power used by standard auto radios. Even with the motor turned off, the battery drain is so insignificant as to permit radio operation for more than 100 hours.

Reduction in size will be accomplished not only by the use of transistors, each about the size of a pencil eraser, but also by the elimination of the bulky vibrator, power transformer and rectifier.

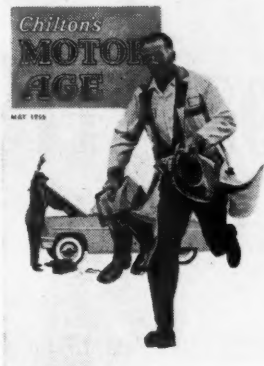
The new radio will be equipped with a superior type of "search tuner," developed by Philco, which automatically brings in the nearest strong radio signal wherever you may be driving. Tuning by this method is more precise than can be accomplished by hand, and eliminates the necessity for "dial twirling" in quest of broadcast stations.

## Yarnall Addresses AOT of New York

In a recent address before the Automobile Old Timers of the N. Y. Metropolitan Council, NADA president Frank H. Yarnall cited reasons dealers had given him for 1954's low profit picture.

"Bootlegging," according to Yarnall, "did more to break down the market than any other single thing. It is a practice condemned by all good dealers and by all manufacturers."



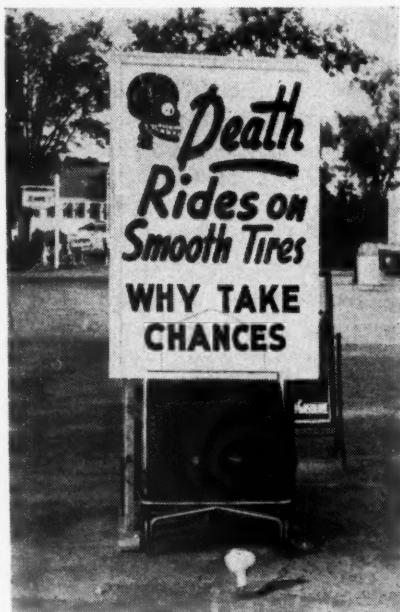


Win This Original Painting  
See Page 37

## Inter-Industry Adds To Nat'l Committee

Appointments of four new members to the Inter-Industry Highway Safety Committee were announced recently by A. VanderZee, chairman of the Committee.

The four additions bring Na-



**TIRE SALES** took a boost when service station operator George Couture, Dover, N. H., started a combination sales promotion and safety campaign. He stuck up a sign with a skull on it and the words: "DEATH Rides On Smooth Tires. Why Take Chances?"

tional Committee membership to 17. New members are: Walter B. Cooper, chairman, National Affairs Committee, NADA; Howard N. Hawkes, vice president, United States Rubber Company; Daniel F. O'Madigan, general sales manager, Packard Division; and Ben M. Wilbanks, first vice president of the National Association of Independent Tire Dealers, Inc.

Appointment of Walter C. Lunsford as western regional representative of the Inter-Industry Highway Safety Committee was also announced recently by M. R. Darlington, Jr., managing director.

## Ford Splits L-M, Adds 2 New VP's

Ford Motor Co. has announced the election of two new vice presidents as well as a major organizational and management expansion.

The organizational expansion includes the establishment of separate Lincoln and Mercury Divisions and the formation of a new Special Products Division.

Vice presidents elected were F. C. Reith and Ben D. Mills.

## Nash Dealers Begin 'Disney Showrooms'

Nash dealers all over the United States have turned their dealerships into gala "Disney Toylands." Transformation will last till early June when four Nash cars will be given away in a drawing.

To further the festive atmosphere, large wall posters of Disney characters will grace the walls and balloons and streamers will be suspended in Nash showrooms.

"Disney Toyland will be enjoyed by both youngsters and adults because of the 'carnival' atmosphere, the prizes and the universal appeal of Disney characters," said Fred W. Adams, Nash Motors' director of advertising and merchandising.

# Engineering Highlights



by Joseph Geschelin  
Engineering Editor

**T**HE HECTIC pace of engine development has reached a point of some stability since practically every car producer is committed to fantastically expensive production facilities. There is still a long way to go since it is anticipated that horsepower and torque increases will continue. Nevertheless, current designs have considerable leeway by the route of higher compression ratio, increased displacement, and other changes that need not affect basic tooling materially.

We find on good authority that cast crankshafts will widen in use by 1956 model time. And that 12-volt electrical systems may become almost universal in use.

What of the long range future? Somewhere down the road—perhaps many years off—is the ever present threat of the gas turbine. If it does make the grade eventually, it may well mark a complete revolution not only of powerplant design but of manufacturing techniques and equipment as well. It may be hard to swallow but it seems obvious that if and when the gas turbine may emerge, it will obsolete the extensive and expensive automation lines now in the ascendancy.

(Continued on page 150)

# Don't Be Scared By Prosperity



by Henry Ford II  
President, Ford Motor Company

Condensation of the address made in New York recently by the president of Ford at annual newspaper dinner of the Bureau of Advertising, American Newspaper Publishers Assn.

**T**HERE SEEMS to be a tingling apprehension abroad in the air—an old and familiar feeling to Americans. We are undergoing a spell of vigorous prosperity, and it scares some people. They get superstitious. They knock on wood. They start having congressional investigations of things.

Sooner or later the long, accusing finger points at the automobile industry. People tell us we are selling too many cars. They worry about the possibility of strikes. They get all worked up about things like automation, guaranteed annual wages, phantom freight and bootlegging.

In this volatile and tension-charged atmosphere, I come to spread oil on troubled waters, and not to stir up any new tempests. Times really are good—and there's every reason to believe they will stay good so long as we keep our nerves steady and our spirits high. . . .

The booming market for both new and used cars has frankly been something of a surprise—even to us [at Ford Motor Co.]. It may mean, actually, that we are going to have to throw away a lot of the economic yardsticks of the past. We may be riding the tide of a new kind of consumer demand that will carry us forward to new highs in production and prosperity.

Over the next three years, Ford Motor Company is presently committed to spend 625 million dollars on new property, plants and equipment. This is in addition to the

**Ford president rejects idea that "planned scarcity is way to prosperity"; cites tremendous role that is played by Distribution in America's system of free enterprise**

one billion, seven hundred million dollars that has been spent since 1946 on similar expansion programs.

**Build for Future**

We are building for the future, every day — because we want to have the products to sell when the people are ready to buy. We don't want to run scared—or scarce!

For the present, then, let's try to enjoy our good fortune and reject once and for all the idea that planned scarcity is the way to prosperity. . . .

Today both management and workers know that a major strike could dump the apple cart of our present and prospective high prosperity — and nobody wants that. Ford Motor Company's management has every determination to arrive at a fair agreement in the best interests of our employes, our company, the automobile industry and the public at large. . . .

As a businessman, I never cease to marvel at the wonders of the American economy, and more and more I have the feeling that many Americans who, not so long ago, were hostile or indifferent to our economic system, are joining the ranks of the faithful.

After all, what nation has ever had it so good? The American common man is a most uncommon man by the standards of the rest of the world. The Ford hourly worker, for instance, had an average income of nearly five thousand dollars last year and probably rated among the top one per cent of the world's wage earners. As a

nation, we have material comforts and security beyond the dreams of most people.

As we all know, a prime characteristic of our consumer-centered economy is that it gives to the problems of distribution and marketing a weight at least equal to those of production. It's interesting that Marx and the other old-time thinkers grossly underrated the importance of the distribution of consumer goods. Blinded by dogma, their followers still haven't seen the light.

Consider the plight of Ivan. He works all day in a factory making shoes. One hundred miles away, his cousin Boris raises potatoes. Ivan wants potatoes, and Boris wants shoes, but 100 miles is a long walk in any language. So Ivan goes hungry, Boris goes shoeless, and the economy goes nowhere!

**Distribution Essential**

Some of the same indifference or downright antagonism to distribution has crept into our own thinking, over here. The labeling of the "middle man," the retail merchant, the salesman, and the advertiser as economic "parasites" has created a bias against distribution. We speak often of the "high costs" of distribution. Seldom do we think in terms of value added by distribution. It should be perfectly obvious that the whole distribution process, including advertising, promotes more consumption, more production and more employment. In so doing, it effectively lowers the cost and adds to the value of the goods which ultimately

find their way to the consumer.

The real weight we give to distribution can be readily measured in the amount of potential work-energy which we allot to it. Here's something for the record: The horsepower of our system for transporting goods to the market — our railroads, merchant ships and trucks — is more than ten times that of all machines used to produce consumer goods.

More than 20 per cent of our use of private automobiles is connected with shopping. Our vast system of distribution would be wholly inadequate if the consumer himself were not motorized.

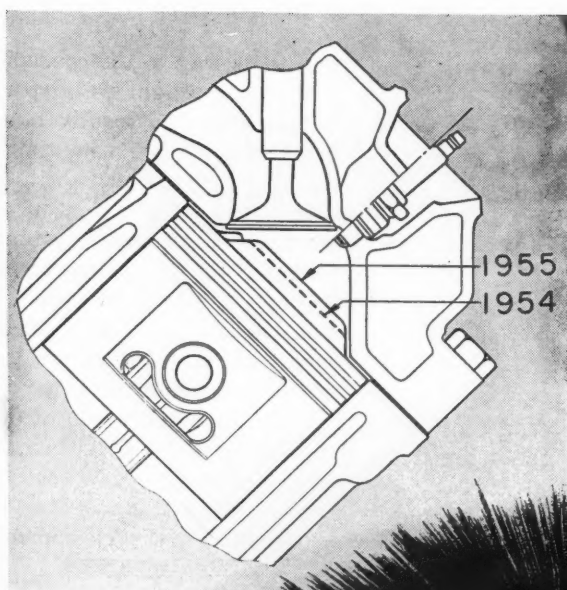
That's why we in the auto industry take such a fine, altruistic pleasure in increasing the car population. We figure that we are adding new power to the whole American economy, new capital sources which will generate more and more business for the American people. . . .

Ford Motor Company, of course, has a tremendous stake in steady employment at high levels. It's just good normal business practice to do all we can to stabilize our operation. More than that, we know that when people stop working, they stop buying cars. In 1929-1930, when non-agricultural employment fell 6.1 per cent, sales of cars fell almost 37 per cent and trucks by more than 28 per cent. A similar six per cent drop in employment in 1937-38 led to a decline of 50 per cent in sales of cars and trucks. . . .

Over-all prosperity is the first determinant of the level and stability of employment. No private industry plan can long maintain high employment in the face of a downward business trend. Nor is there any direct way I can imagine to avoid by private means the dislocations which come from technological obsolescence. Coal put firewood out of business, then along came gas and oil. Now it's atomic energy, and one day it may be

*(Continued on page 114)*





Factory engineers are doing an excellent job in their constant efforts to design combustion chambers that achieve maximum compression ratio for today's fuels

by Jack Montgomery, Technical Editor

# Combustion Chambers for

Above: Comparison of 1954 and 1955 Buick combustion chambers; note domed piston head and the inlet valve chambers; dotted line shows '54 setup.

Swirl pattern of light deposits on 1955 Buick piston.

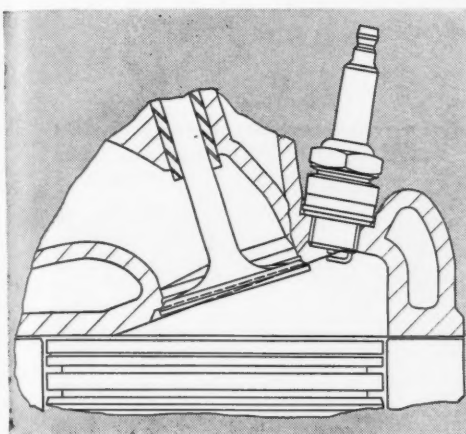


As a general rule current engines have made big strides in effecting better breathing. This objective has been met by using larger valves, increasing valve lift, increasing the size of ports, and resorting to better streamlinings of intake and exhaust passages.

Engine designers are constantly striving for distinctiveness in the competition for better performance and higher efficiency from a given package. For example, Chrysler Corp. now has two basic designs—twin rocker shafts for each cylinder head, coupled with a hemispherical combustion chamber; and the line of smaller displacement engines with a single rocker shaft and a modified form of combustion chamber.

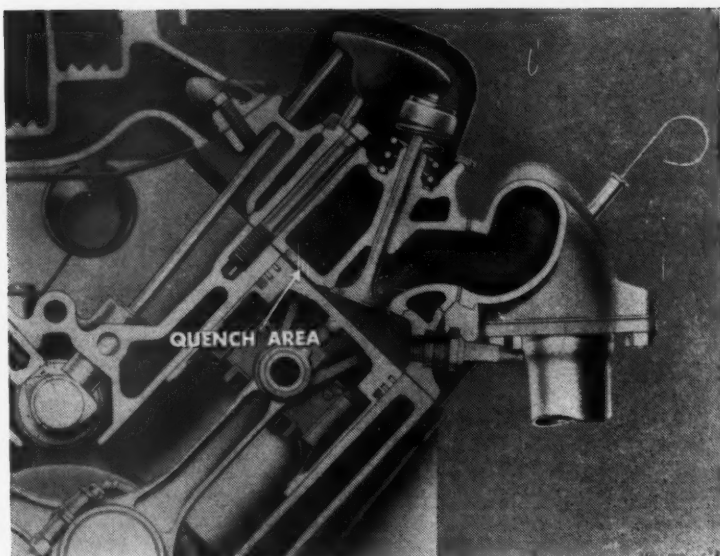
The usual arrangement on most makes is a single rocker shaft per head. However, both Chevrolet and Pontiac have introduced design arrangements that eliminate rocker shafts, their mountings, and the usual rocker arms. Instead, they employ a pressed steel rocker arm pivoted on a spherical bearing, the assembly being held securely in place by means of a heavy stud.

Buick has achieved distinctiveness through



**Above:** A transverse section view of a 1955 Cadillac combustion chamber.

**Right:** Cross section of V-8 Chevrolet chamber; stud secures rocker arm.



**Below:** Cutaway view of Chrysler valve drive train and hemispherical combustion chamber. Beneath this figure is cutaway view of Plymouth valve drive train and Plymouth combustion chamber.

# Today's Fuels

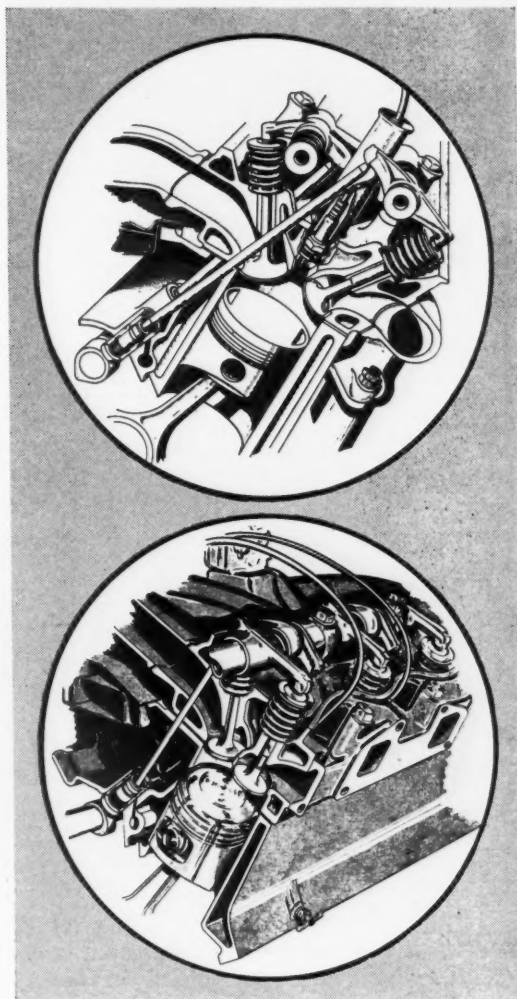
the use of vertically mounted valves, reducing the width of the engine and making possible the development of a special combustion chamber form.

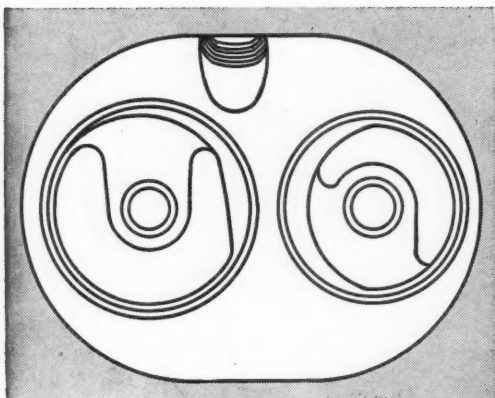
A number of 1955 engines have eliminated the usual removable valve guides. Instead, the valve stem operates directly in holes bored in the head. This improves heat transfer enormously. In fact, figures have been published indicating a decrease in valve head temperature of around 200 F and a corresponding decrease in stem temperature of around 100 F. Better cooling through more liberal water jacketing and more complete jacketing has had an important influence upon improvement in thermal efficiency.

Moreover, better foundry techniques that make it possible to produce more effective cooling of the cylinder head and intake manifold, provide better opportunity for good temperature control of the fuel-air mixture in the interest of volumetric efficiency.

No longer new is the fact that the 12-volt system is very much in evidence.

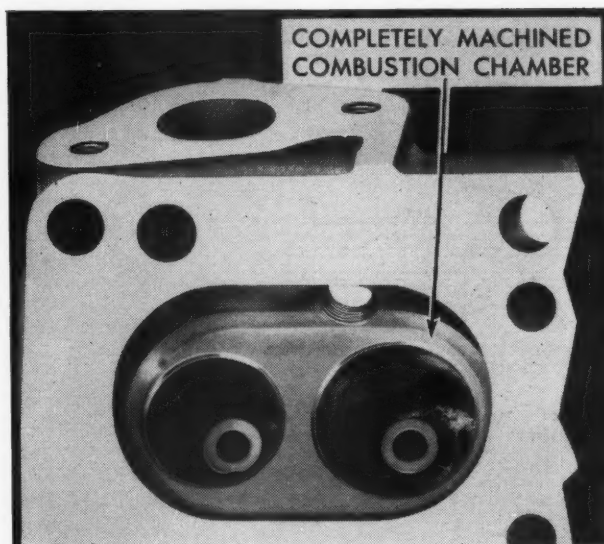
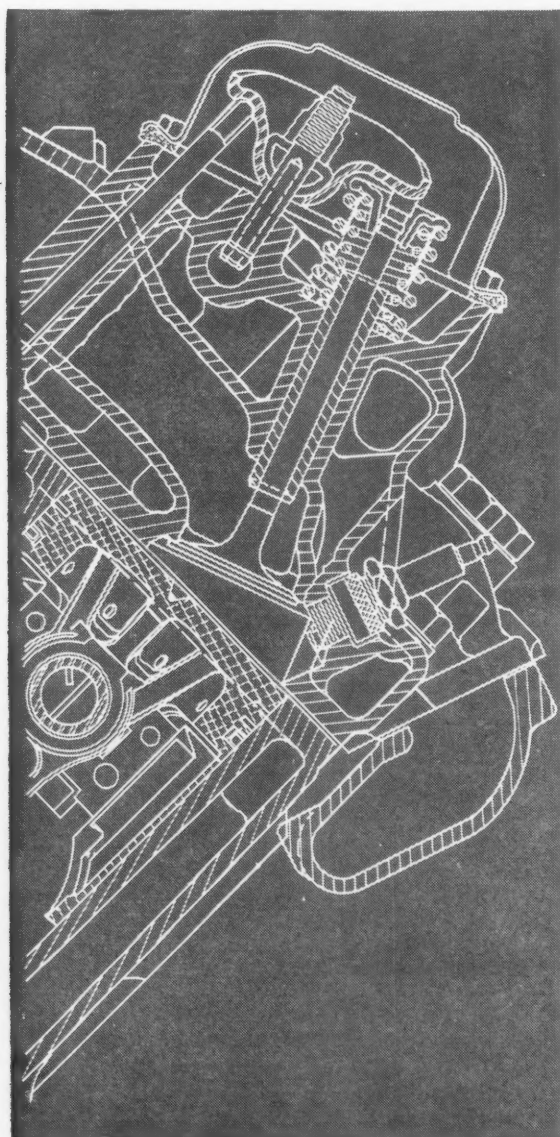
*(Continued on page 46)*





Plan drawing of Packard combustion chamber.

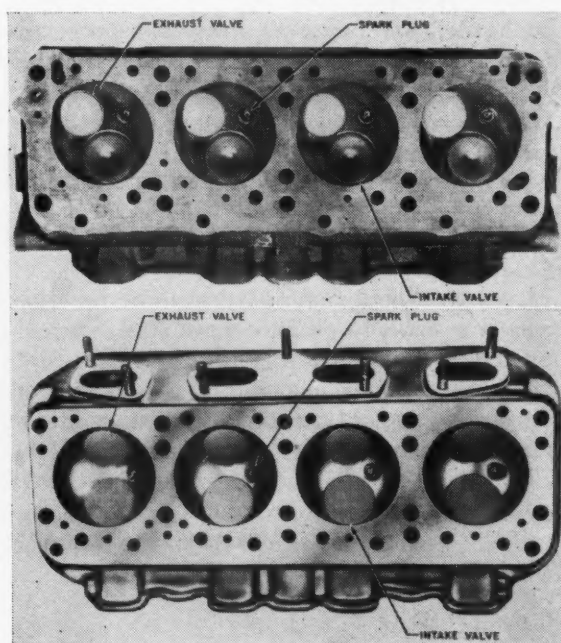
Below: Cross section of Pontiac V-8 chamber; note water-cooling of valve and spark plugs.



Above: Plan view of a Pontiac combustion chamber.



Below: Plan view showing comparison of Chrysler (bottom) and Plymouth (top) combustion chambers.





It has made a clean sweep of all General Motors divisions including Chevrolet six-cylinder engines for cars and trucks; and has been extended to Packard, Studebaker President, and American Motors models using V-8 engines.

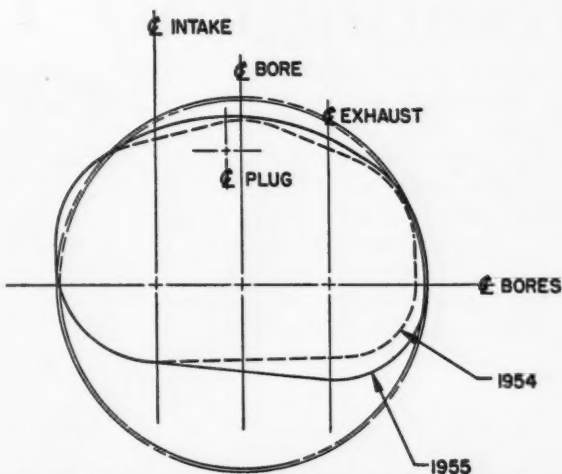
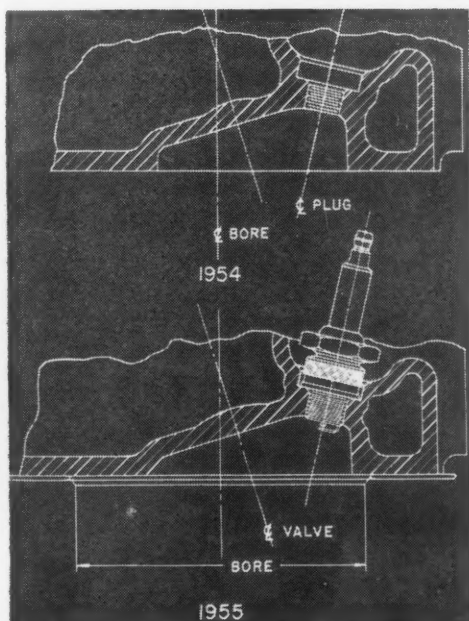
Depending upon individual preferences as well as the play of economics, combustion chambers either are machined all over or used as-cast. With the current upward trend in compression ratio, touching 9 to 1 on several engines, it is obvious that combustion chamber volume is critical and must be held within extremely close tolerances. Advances in foundry techniques have made it perfectly feasible to hold accurate tolerances without machining; and special inspection equipment is readily available to assure maintenance of such tolerances.

One major advantage claimed by proponents of as-cast chambers is the wide latitude in the shape of combustion chambers, making it possible for the designer to achieve the characteristics he wants.

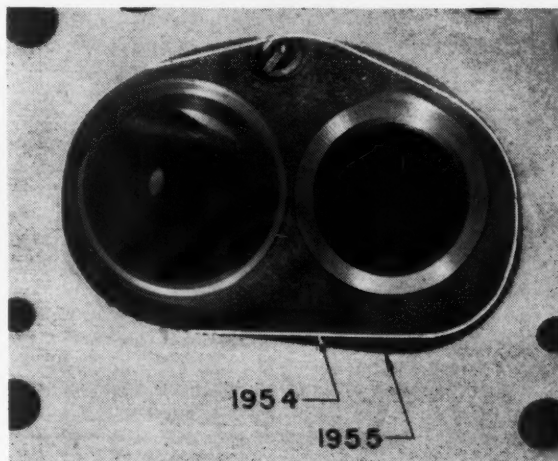
Where combustion chambers are fully machined, it is almost imperative to have some kind of regular geometric form such as hemispherical, cylindrical, oval, or elliptical. As will be noted later, a number of manufacturers have elected to machine fully their combustion chambers.

Let us consider a sampling of combustion  
(Continued on page 78)

**Below: Transverse view of the Oldsmobile combustion chambers for 1954 and 1955.**

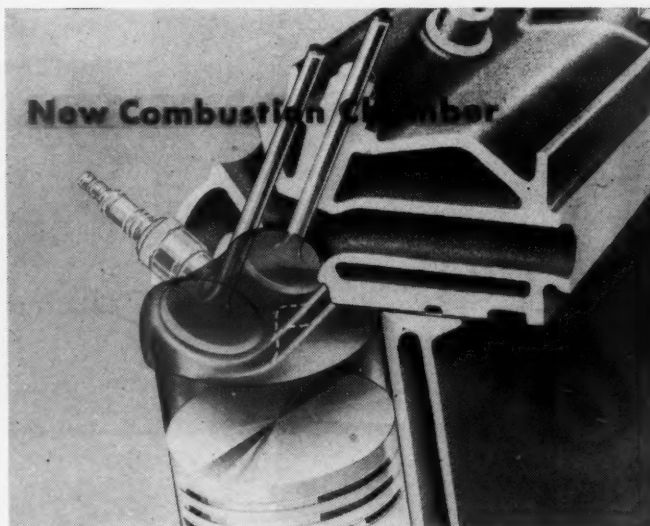


**Comparison of the 1954 and 1955 Oldsmobile combustion chambers with respect to the cylinder bore.**

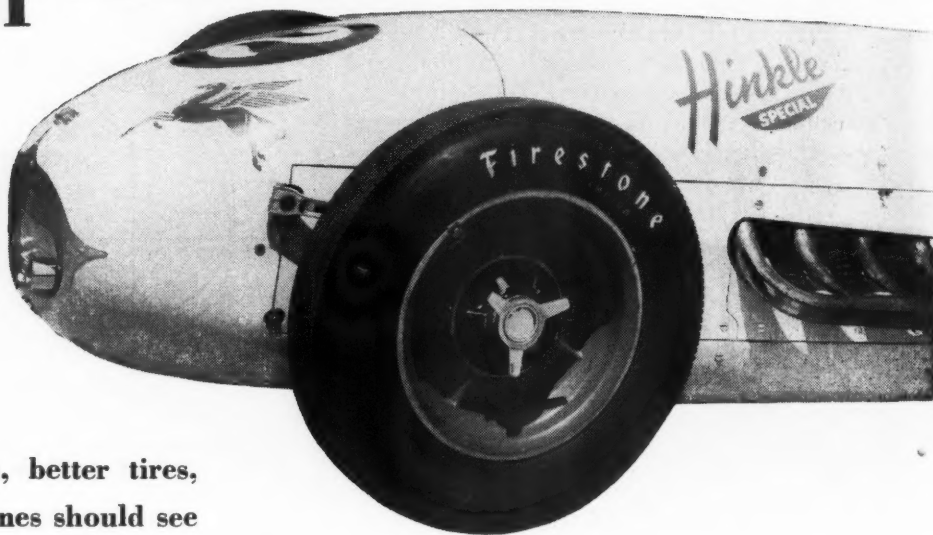


**Comparison of Oldsmobile combustion chambers.**

**Below: Combustion chamber used in Ford family; elimination of dotted line is change from 1954.**



# Indianapolis Preview



New streamline bodies, better tires, brakes, and hotter engines should see existing records topple at the Classic

by R. Raymond Kay, Pacific Coast Editor

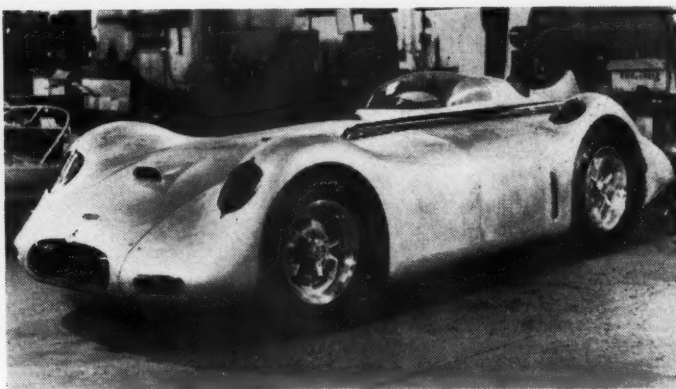


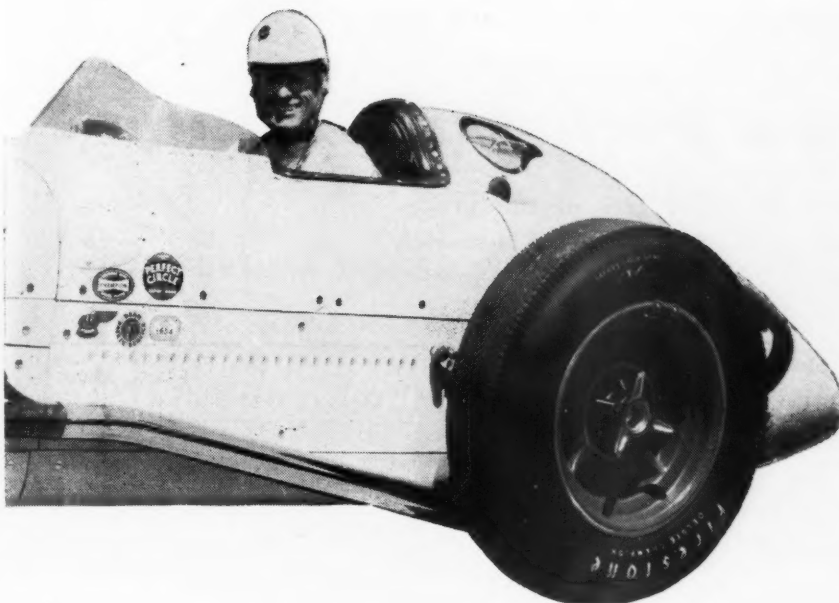
**W**HAT will the new streamliners do? Will power steering pay off? How will the rookie drivers do against the veterans? Will the Ferrari make it? Is this Novi's year? Will improved wheels, brakes, and tires add to the speed? Will new speed records be made? Will Billy Vukovich make it three straight?

Racing enthusiasts will get the answers at the 39th Annual Memorial Day 500-mile speed classic at the Indianapolis Motor Speedway.

And there will be many interesting things to look for: car-to-pit radios, a new Firestone tire, a new model magnesium wheel.

Left: View of new 500 D Kurtis Kraft chassis. Note intake air scoop and offset engine. Below: Sumar Special features Plexiglas canopy for qualifying run. For race, a standard windshield will be used.





## Pick the Winners

The popular "Pick the Winners" chart appears again this year for Indianapolis-minded readers. Turn the page for a complete run - down of entries, drivers, and engines in the Memorial Day race at the Indianapolis Speedway.

First select the 33 cars you think will qualify and then figure out your winners.

Driver in the Hinkle Special is Jack McGrath. McGrath holds both the Indianapolis lap record, 141.257 mph, and 10-mile qualifying record.

Everything is in high gear for the fastest race in Speedway history. It will take a 139 mph average qualifying speed to get one of the 33 starting positions. About 55 cars will battle it out. The post position winner will probably average 143 mph.

Will the 500-mile grind produce a new speed record this year? Speeds often depend on the psychological state of drivers during the race. If one gets hurt, they all automatically slow down. Barring accidents, and with favorable weather and track conditions, speed for the race

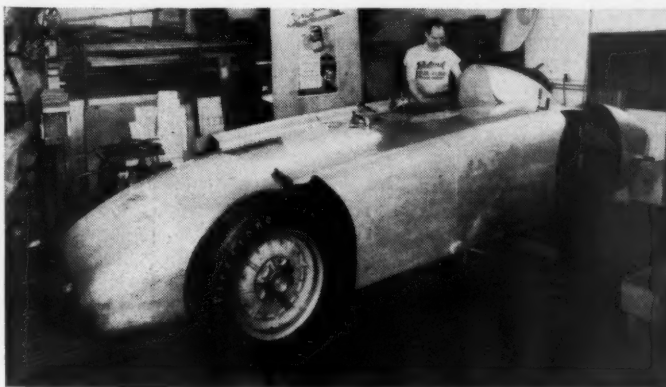
could well average 133 mph, up from last year's record 130.84 mph.

Many modern-day passenger car improvements originated with Indianapolis competition. The 1955 event will have a reverse twist—race-car designers using a passenger-car development. Look for some eight cars with power steering.

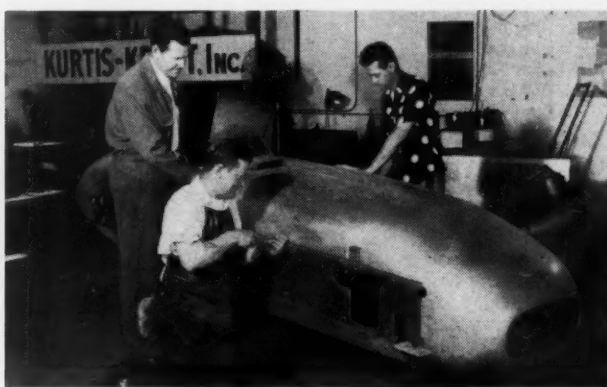
Once again the old reliable Meyer & Drake 4-cyl 270-cu-in. Offenhauser engine will power most of the entrants, with ten new engines this year, according to vice-president Louis Meyer.

*(Continued on page 154)*

Quinn Epperly checks over the progress of the Belond-Miracle Power Special. Note air scoops over front wheels. Car will be driven by Jim Rathmann.



Car-builder Frank Kurtis (left) supervises the construction of the Bardahl-Ferrari Experimental. Car's chassis will use the Ferrari 6 cylinder engine.





## Indianapolis Preview ... Continued from Page 49

# Can You Pick The Winner?

The fastest 33 cars of this group  
will be in the lineup on Memorial  
Day. Which entries do you choose?

Driver's Name	Car	Engine	Clockers Comments	Your Selection
No driver assigned	Ray Brady	Offy 269		
Art Cross	Belanger Motors Special	Offy 270	Win would be no surprise	
No driver assigned	Thorne Engr. Corp. Special	Offy 274		
Leroy Warriner	Rotary Engr. Corp.	Offy 270	Will be trying	
Pat O'Connor	Ansted-Rotary Special	Offy 270	Good combination	
Johnny Boyd	Sumar Special	Offy 270	Money chance	
Jimmy Daywalt	Sumar Special	Offy 270	Watch out	
No driver assigned	Sumar Special	Offy 270		
Bob Sweikert	John Zink Special	Offy 270	Experienced driver	
Jimmy Davies	Bardahl Special	Offy 270	Will try hard	
Al Keller	Sam Traylor Offenhauser Special	Offy 270	First time combination	
Jack McGrath	Hinkle Special	Offy 270	Likely winner	
Paul Russo	Wolcott Special	Offy 174	Knows the ropes	
Tony Bettenhausen	Chapman Special	Offy 270	Old timer	
Jimmy Reece	Malloy Special	Offy 270	Fleet	
Cliff Griffith	La Villa Special	Offy 270	Been away	
Jimmy Bryan	Dean Van Lines Special	Offy 270	2nd last year—could win	
No driver assigned	Ed Walsh	Offy 270		
No driver assigned	Ed Walsh	Offy 270		
Jim Rathmann	Belond-Miracle Power Special	Offy 270	Could take it	
Freddie Agabashian	Federal Engr. Special-Detroit	Offy 270	Reliable	
Chuck Weyant	Federal Engr. Special-Detroit	Offy 270	Never know	
Duane Carter	Agajanian Special	Offy 270	Consistent	
Shorty Templeman	M. Pete Wales	Offy 270	Outside chance	
Johnnie Tolan	Carl L. Anderson	Offy 270	Tough spot	
Walt Faulkner	Merz Engineering Special	Offy 270	Heavy footed	
Andy Linden	Hart Fullerton	Offy 270	Will set pace	
Bill Vukovich	Lindsey Hopkins	Offy 269	After 3 in a row	
Len Duncan	McNamara Special	Offy 270	Looked very good last year	
Johnny Thomson	McNamara Special	Offy 270	Is fast	
Ray Crawford	Crawford Special	Offy 270	First try	
Tony Bonadies	J. S. Donaldson	Offy 270	Good in midjets	
No driver assigned	Motor Racers, Inc.	Offy 273		
Jerry Hoyt	Jim Robbins Special	Offy 270	Likes track	
Jiggs Peters	Glessner Special	Offy 270	Must pass test	
Gene Hartley	Commercial Motor Freight Special	Offy 268	Maybe	
Eddie Russo	Dr. Sabourin Special	Offy 270	Can go	
Duke Nalon	John L. McDaniel	Offy 270	Old timer	
Al Herman	Martin Bros. Special	Offy 270	Not out of it	
Rodger Ward	Casale & Greenman Special	Offy 270	Be in 1st ten	
Spider Webb	Roy McKay Special	Offy 270	Stout hearted	
Elmer George	Walmotor Special	Offy 270	Must pass test	
Don Freeland	Bob Estes Special	Offy 270	Good reports	
Bill Homeler	Travelon Trailer Special	Offy 270	Fast	
Sam Hanks	Cars, Inc.	Offy 270	Now or never	
Manuel Ayulo	Schmidt Special	Offy 270	Speedy boy	
No driver assigned	Schmidt Special	Offy 270		
No driver assigned	Central Excavating Special	Offy 270		
Johnny Kay	Leitenberger Special	Offy 273	Newcomer	
Ed Elisian	Lutes Truck Parts Special	Offy 270	Never know	
Pat Flaherty	Dunn Engineering Special	Offy 273	Will cut some fast ones	
Troy Ruttman	Novi Air Conditioner Special	Offy 182.5	Could set new qualifying record	
No driver assigned	Dean Van Lines Special	Offy 269		
Cal Niday	D-A Lubricants Special	Offy 270	Will be close	
No driver assigned	G. Geddes	Ferrari		
No driver assigned	Ray Brady	Offy 270		

# New PRODUCTS SHOW WINDOW

FOR FURTHER INFORMATION USE POSTCARD FACING PAGE 52

245

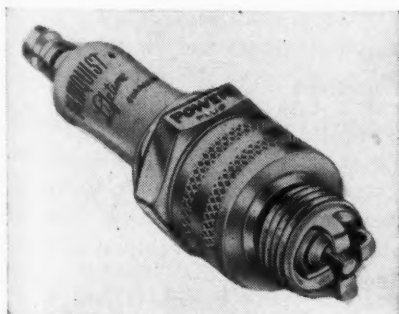
## Car Radio

**Motorola, Inc.:** This company has marketed a radio that it says can be installed in twenty minutes. According to the maker, the one-piece universal unit has a compact, lightweight design and can be connected to almost all makes and models of cars without modification. The radio, called the 5M-Volumatic, has automatic volume control, tone control and a six by nine inch dash speaker. The six-tube model is available for use with 6- or 12-volt electrical systems.

246

## Spark Plug

**Almquist Engineering Co.:** This maker has introduced a "lifetime" high compression spark plug for all passenger cars and trucks. It is claimed that this plug improves engine performance under maxi-

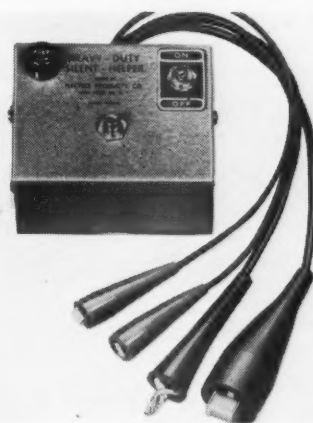


mum compression pressures and helps provide better gas mileage. The chrome plated Power-Plug also features aluminum oxide aircraft type insulators, according to the maker.

247

## Remote Control

**Electro Products Co.:** The "Silent Helper" heavy duty remote



control unit has been introduced by this firm. The auxiliary switch makes tuning and servicing vehicles an easier job because the engine can be started with it from outside the car, according to the manufacturer. Housed in a metal case the unit has a rubber base to prevent marring painted surfaces.

248

## Tire Valve Tool

**A. Schrader's Son Div. of Scovill Mfg. Co., Inc.:** This company's pull type lever tool is said to seat snap-in valves in round rim holes on any model car with any rim size. The knurled fitting of the tool attaches to the cap threads of the valve and slight lever pressure pulls the valve into the required airtight seating position, according to the maker.

249

## Electrical Tape

**Behr-Manning Div. of Norton Co.:** The new line of Behr-cat plastic electrical tapes are said to be 7, 10 and 20 mils thick, respectively, and bear Underwriters Laboratories approval for a dielectric strength of 1,000 volts per mil of thickness. They can be stretched to two and one-half times their relaxed length, and have a polyvinyl backing which will wrap neatly on irregular surfaces and resist abrasion, corrosion, acids, and so on, the company states.

250

## Battery Carrier

**Five Star Manufacturing Co.:** A battery carrier designed to carry all standard size batteries by the case has been marketed by this

(Continued on page 52)



## New Products . . . . . Continued from Page 51

company. This tool is made of light weight aluminum alloy and is said to give positive control over the battery due to the steel tips on three points which also gives a non-tilting action. The "Karrier" features a spring action on the lever type handle.

251

### Low Pressure Gun

John B. Moore Corp.: P-300 is an air-operated siphon paint spray gun, which is said to operate on air pressure as low as 5 lbs psi. and draw from a one-quart cup. The maker states that these features permit the gun's use for such things as stripe painting and touch-up work.

252

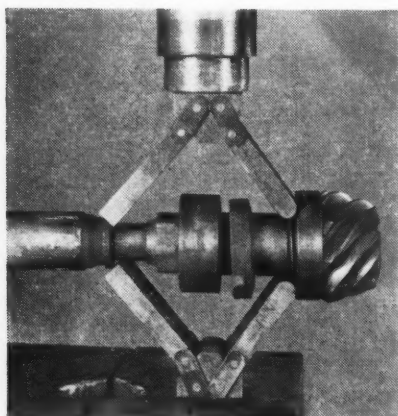
### Paint Remover

Acme Quality Paints, Inc.: A non-flammable flush-off type paint remover has been introduced by this firm. This remover is brushed or sprayed on and in 15 to 30 minutes the old surface swells and pops away from the bare metal, lacquer finishes are dissolved, the maker states. The residue is washed off with water and brush or waste cloth.

253

### Pinion Gear Remover

Beauloye Bros. Eng. Co.: This



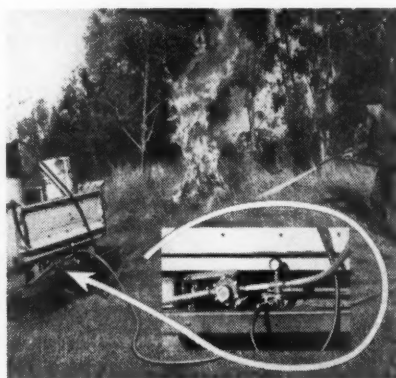
company has marketed a pinion gear spline assembly remover for

Chevrolests and Buicks. Designed to be used in conjunction with a press or large vise the device is said to remove the Chevrolet assembly in minutes. On the Buick a quick two-step operation does the job, according to the company.

254

### Rotary Pump

H. S. Watson Co.: This company has marketed a rotary pump designed to operate from a rear power source on pick-up trucks. The pump is said to develop pressures up to 350 pounds and is used for spraying chemicals, liquid fertilizers, and so on. Also said to be usable on tractors having a 1 $\frac{3}{8}$ "-6 spline PTO, the pump is



furnished in complete kits ready for installation.

255

### Mechanic's Elevator

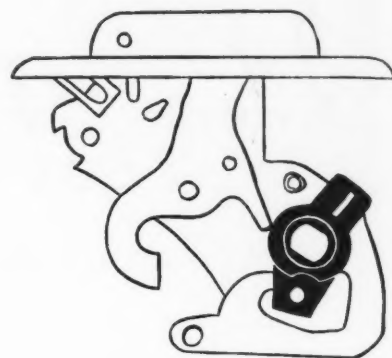
Southeastern Mfg. Co.: Engine repairs are said to be made easier and faster with this adjustable all-steel step. The portable device clamps over the tire allowing mechanics workable access to the engine compartment of trucks. Claimed to fit any 20" tire quickly the 'lightening' adjustable step collapses to compact size for transporting or storage.

256

### Door Lock Part

Car-Pak Mfg. Co.: A replacement hub which is said to make

possible the repair of door locks on 1948 to 1950 Buick, Cadillac and Oldsmobile 98's has been an-



nounced by this firm. A new hub can be installed by driving out the spring rivet, removing the old hub and replacing with a new one, flaring over and re-riveting, the maker states.

257

### Tool Cabinets

Huot Mfg. Co.: Four tool cabinet models have been added to this company's line. The new additions include a low-cost, 4-drawer, all-steel chest that features a top drawer with movable dividers and a bottom drawer with a socket-holding compartment; two chests with six drawers, one 5 inches deep, plus other features; the "super duty" cabinet, which has two big drawers, a lower compartment and a locking, hide-away front. It is furnished with casters and designed to support either of the above tool chests, the maker states.

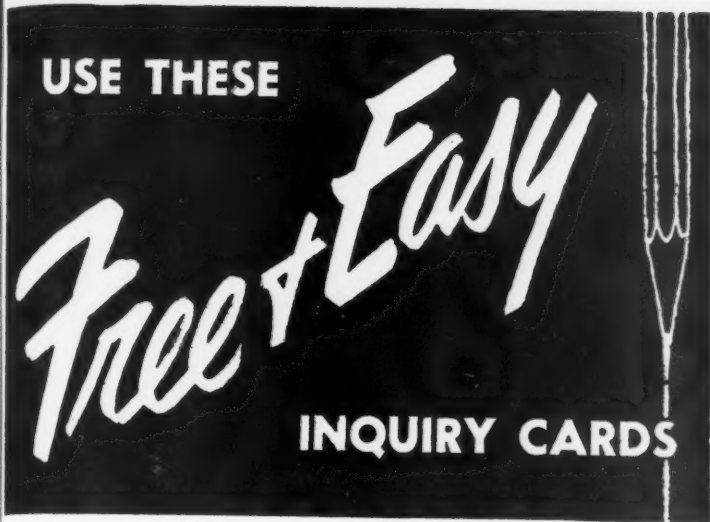
258

### Enamel

Ditzler Color Div., Pittsburgh Plate Glass Co.: An automotive enamel that is claimed to resist chalking, checking, and loss of gloss, has been developed by this firm.

The manufacturer claims that the coating possesses a chalking rate less than one-fourth that of the best enamels now used in automotive production. "Ditzler D R E" is also said to possess exceptional resistance to checking.





The Inquiry Card—How It Works

EACH month Motor Age's New Products Show Window describes dozens of fast-moving items and money and time saving equipment from the country's leading manufacturers of dependable automotive products.

When you want more free information on any of these products, simply mark a circle around the same number on the postcard as appears under the item described. You may circle as many items as you wish. Use either or both cards. Separate information will be sent to you on each item. Be sure to give your full name and address.

New Literature

259. Tool Catalog

Fairmount Tool & Forging, Inc.: This manufacturer has made available its latest tool catalog. The 72-page, two-color book contains descriptions, uses and dimensions of the company's complete tool line. Tool sets and a variety of point-of-sale display boards are also included in the well illustrated publication.

260. Air Conditioning Catalog

Harry Alter Co.: A wholesale catalog on car and truck air conditioning units is available through this company. Included, in addition to complete installations, are compressors, evaporator-blowers, regulating valves, condensers and other car air-conditioning parts. All items

(Continued on next page)

Postcard valid for 90 days only.

Frank P. Tighe, EDITOR MOTOR AGE  
P. O. Box 76, Village Station, N. Y. 14, N. Y.

5/55

Please send me further information on the New Products, the code numbers of which I have circled below.

- |                          |                               |                           |
|--------------------------|-------------------------------|---------------------------|
| 245. Car Radio           | 259. Tool Catalog             | 269. Plastic Slip Covers  |
| 246. Spark Plug          | 260. Air Conditioning Catalog | 270. Wind Roar Silencer   |
| 247. Remote Control      | 261. 'How to Profit' Booklet  | 271. Exhaust Extension    |
| 248. Tire Valve Tool     | 262. Brake Maintenance Book   | 272. Antenna Bumper Mount |
| 249. Electrical Tape     | 263. Service Parts Wall Chart | 273. Tirespreader         |
| 250. Battery Carrier     | 264. Ford Tool Manual         | 274. Compression Gage     |
| 251. Low Pressure Gun    | 265. Nylon Garage             | 275. Dispenser-Bleeder    |
| 252. Paint Remover       | 266. Trailer Mirror           | 276. Radiator Conditioner |
| 253. Pinion Gear Remover | 267. Key Case                 | 277. Headlight Control    |
| 254. Rotary Pump         | 268. Boat Carrier             | 278. Strapping Tool       |
| 255. Mechanic's Elevator |                               | 279. Seat Spring Pad      |
| 256. Door Lock Part      |                               |                           |
| 257. Tool Cabinets       |                               |                           |
| 258. Enamel              |                               |                           |

Your Name.....Your Title.....  
Your Company.....  
Your Business: Wholesaler.....Repair Shop.....Car Dealer.....  
Address.....(Street & No.).....(City).....(Zone).....(State).....

Postcard valid for 90 days only.

Frank P. Tighe, EDITOR MOTOR AGE  
P. O. Box 76, Village Station, N. Y. 14, N. Y.

5/55

Please send me further information on the New Products, the code numbers of which I have circled below.

- |                          |                               |                           |
|--------------------------|-------------------------------|---------------------------|
| 245. Car Radio           | 259. Tool Catalog             | 269. Plastic Slip Covers  |
| 246. Spark Plug          | 260. Air Conditioning Catalog | 270. Wind Roar Silencer   |
| 247. Remote Control      | 261. 'How to Profit' Booklet  | 271. Exhaust Extension    |
| 248. Tire Valve Tool     | 262. Brake Maintenance Book   | 272. Antenna Bumper Mount |
| 249. Electrical Tape     | 263. Service Parts Wall Chart | 273. Tirespreader         |
| 250. Battery Carrier     | 264. Ford Tool Manual         | 274. Compression Gage     |
| 251. Low Pressure Gun    | 265. Nylon Garage             | 275. Dispenser-Bleeder    |
| 252. Paint Remover       | 266. Trailer Mirror           | 276. Radiator Conditioner |
| 253. Pinion Gear Remover | 267. Key Case                 | 277. Headlight Control    |
| 254. Rotary Pump         | 268. Boat Carrier             | 278. Strapping Tool       |
| 255. Mechanic's Elevator |                               | 279. Seat Spring Pad      |
| 256. Door Lock Part      |                               |                           |
| 257. Tool Cabinets       |                               |                           |
| 258. Enamel              |                               |                           |

Your Name.....Your Title.....  
Your Company.....  
Your Business: Wholesaler.....Repair Shop.....Car Dealer.....  
Address.....(Street & No.).....(City).....(Zone).....(State).....

## New Products . . . . .

Continued from Page 53

are illustrated, described and priced at wholesale. Called the "Dependabook," it covers over 10,000 items and is offered free.

### 261. 'How To Profit' Booklet

Inland Mfg. Co.: This company has published a booklet entitled "Blueprint for Profit." The publication contains case histories of dealers and shops that have increased profits through servicing radiators. Also included is information about necessary equipment, tools and supplies needed to set up this service.

### 262. Brake Maintenance Book

Grizzly Mfg. Div.: Suggestions on reducing brake maintenance costs while increasing drum life and brake safety are contained in the booklet entitled "More for Your Dollar in Longer Brake Block and Drum Life." Fully illustrated with photographs, diagrams and charts, this book tells how to increase the effective service life of brake drums as well as blocks, and still achieve higher standards of safety in trucks.

### 263. Service Parts Wall Chart

Electric Auto-Lite Co.: The 1955 edition of this company's service parts wall chart is now available. The wall chart contains application information for starting motors, distributors, coils, generators, regulators and their component parts. The pages are marked with visible index according to product groups for easy location of information. A new feature is a section devoted to specifications (settings and adjustments) for generators, starting motors, regulators and distributors.

### 264. Ford Tool Manual

K-D Mfg. Co.: The 1955 edition of the K-D Tools manual, "K-D Valve Service Tools for All Ford-built Motors," has been published by this company. It describes and illustrates removal and installation of valves in all models from the 1928 Model A to the 1955 OHV-8 engines. The manual covers service and installation of free-type valves, plus operating procedure for basic tools. Offered free, the booklet includes a quick reference chart showing correct combinations of tools for all models.

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New York, N. Y.

# NEW ACCESSORIES

265

## Nylon Garage

**Domestic Film Products:** The garage consists of a vinyl plastic coating over nylon fabric which is attached to an all-steel tubular frame with multiple spring action, the maker states. The two center steel tubes are driven into the ground and the fabric and the rest of the frame fold against them. The automobile is driven between the two center posts and then the fabric and supporting frame are pulled down over the front and back of the car, it is said.

266

## Trailer Mirror

**Yankee Metal Products Corp.:** This company has marketed an adjustable, double extension aluminum trailer mirror. The 5-inch round mirror can be extended any distance from 13 $\frac{3}{8}$  inches to 24 $\frac{3}{4}$  inches by turning a coupling on the extension arm, the maker states. The unit is designed for cars that pull house trailers or small trucks with extra large bodies. A universal bracket provides for either clamp-on or bolt-on mounting.

267

## Key Case

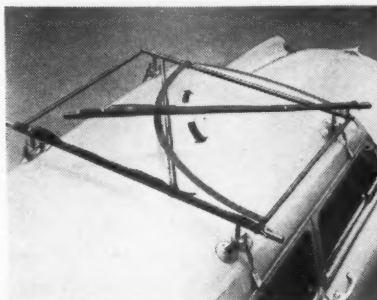
**Sigma Sales Corp.:** The "Key-Matic" is a plastic key case that holds four keys, any one of which pops out when the key-releasing tab is pressed, the maker claims. The "Braille" marked tabs are selected by

touch. After use the key flicks back into the case where it is securely held in place.

268

## Boat Carrier

**Pro-Weld Company:** This firm has introduced a car top boat carrier that it says can be loaded or unloaded by one per-



son. The carrier features a traveling bar which swings through a 90-degree arc, making the job of loading easier. According to the manufacturer, the carrier will handle boats with beams up to 60 inches and weighing as much as 175 pounds.

269

## Plastic Slip Covers

**Akro-Mils, Inc.:** "Seat-Savers" are slip covers for automobile seats and are made of heavy gage clear vinyl plastic material. The styles include custom sizes to form-fit the car seats for all makes and models 1950 to 1955 inclusive, the maker states. The covers are available in "porolated" vinyl material which is said to be self-ventilating (breathes).

270

## Wind Roar Silencer

**Gordag Industries Inc.:** This device is designed to stop the roar of wind rushing past the open windows of a speeding car. According to the maker, Wind Silencers fit all cars. They are said to be easily attached to the car, forward of the front door windows, and are made of steel finished in highly polished chrome.

271

## Exhaust Extension

**The Wilson Company:** The latest addition to this manufacturer's line of exhaust extensions is the personalized Wilcogram. Incorporating a set-in area for two 24-carat gold plated initials and featuring a full-color emblem of an antique car, the Wilcogram is made of mirror-finish, super-satin chrome-plated steel, the maker states.

272

## Antenna Bumper Mount

**Vaaro Div., Davis Electronics:** The Vaaro bumper mount introduced by this company is said to eliminate the need to cut holes in the car to make a proper installation. It is claimed that the unit is engineered to fit any antenna on the market and fits all makes of cars. Two models are offered (cast aluminum and cast bronze) each with standard  $\frac{3}{8}$  inch x 24 thread.

(Continued on page 116)





by Jack Montgomery, Technical Editor

- **Vibration at 30 MPH**
- **Hot engine hard to start**
- **Shift lever won't stay in drive range**
- **Engine has skip in it**
- **Odd noise at idle speed**

### Packard Has Power But Won't Start When Hot

*I have a 1946 Packard which was overhauled recently. New rings, pins, pistons and a valve job. This car when heated up will not start without a push. The car has been driven about 6,000 miles and still would not start when hot. I have checked the carburetor, cooling system and everything seems ok.*

Leonard Selner  
Hanover Green  
Wilkes-Barre, Pa.

**S**INCE this car runs good and has plenty of power, I would suggest making a careful check on the electrical and fuel system. Check the engine ground strap and battery connections, also the ammeter connections. If special equipment is available, test the starting motor draw. You may find the starter is weak. It would be a good

idea to try turning the flywheel by hand when the engine is cold and then when it is hot, to compare the stiffness. Do this by removing the flywheel underpan.

### Vibration at 30 MPH is Troublesome in Olds

We have been trying to solve a forward and aft type of vibration in a 1949 Oldsmobile 76 with standard transmission. This vibration or rapid movement comes in at 18 mph in second gear or 30 mph in high. The frequency of this movement is about 200-300 strokes per minute. We have tuned the engine, replaced carburetor and distributor, taken out the back lash in the rear end, and balanced all four wheels. When driving the car on the road this condition comes in at 16-18 mph, with it being more

## READERS'

# TROUBLE

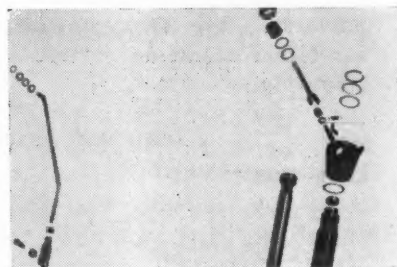
*pronounced when pulling in second or in high gear at higher speed.*

Michael A. Cicchetti  
Presto Automotive  
Essex, Md.

**F**ROM your description it sounds to me like the trouble is in the universal joints or the driveshaft might be unbalanced. I would suggest removing the driveshaft, to examine the joints. Also, there is the possibility of the clutch being out of balance or even a bent fan blade. Any vibration in the engine would show up on the floor without moving the car, so I doubt very much if the trouble is in the valve system.

### Dyna-flow Lever Won't Stay In Drive Range

*I have been having trouble with a customer's 1951 Buick Dynaflow. While cruising this particular car shifts from drive to low at no certain time and for no apparent rea-*



*son. The lever on the indicator just keeps going toward low and*

**FOR ADDITIONAL SERVICE INFORMATION REFER TO CHILTON'S**

## CLEARING HOUSE

# SHOOTING PROBLEMS

*you have to put it back in drive.  
Could you tell me what is wrong?*

*Al Ford's Garage  
Kankakee, Illinois*

**U**SUALLY, when the gear handle works back from drive to low, the trouble is in the top of the steering column at the end of the shift lever. To repair this remove the steering wheel and turn signal plate. Underneath you will find a little ratchet with a spring attached. Either this spring is broken or the ratchet is worn. Replace parts as necessary and your trouble should be eliminated.

### Chevrolet Power Glide Engine Misses at Times

*I have had trouble with a 1950 Chevrolet power glide engine that misses at times. I ground the valves and have 120 lbs. compression on each cylinder. I have not taken the lifters out yet. Can oil pressure in lifters build up to prevent valves from closing properly?*

*Victor Lindahl  
Seattle, Wash.*

**I** WOULD suggest overhauling the carburetor and making sure the float level is set correctly, also carefully examine the points and condenser. Make sure the manifold is properly seated and the exhaust damper valve is free. If the valve lifters are building up pressure, the engine will not idle smoothly.

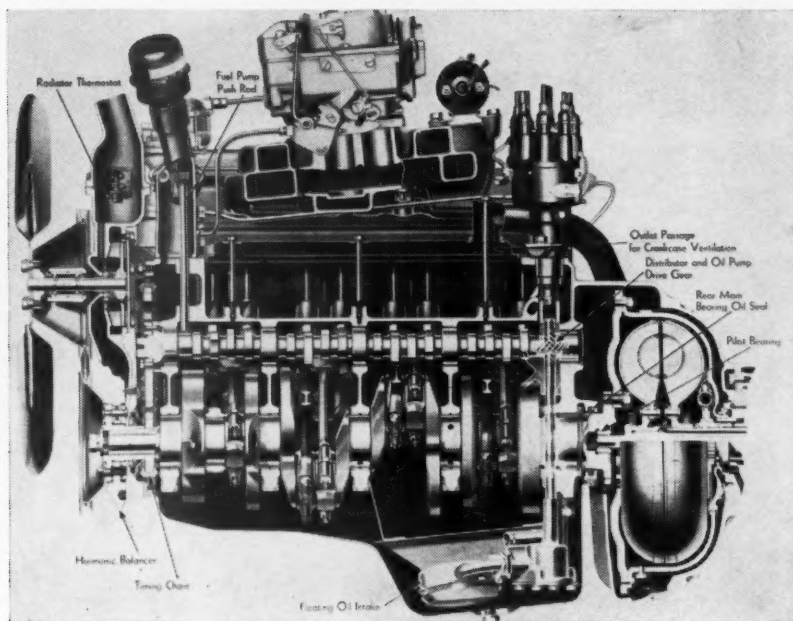
### Cannot Locate Slight Noise at Idle Speed

*I have a 1949 Oldsmobile 98 with 48,000 miles. About five months ago the engine developed a slight rapping noise at idle speed which disappeared on the road. We replaced the hydraulic valve lifters, timing chain, fuel pump, one bent push rod, and did a valve job. We ran the engine with the fuel pump off and the water pump disconnected, but still had the noise. This is louder with the oil breather cap removed. This engine has always had HD oil and is clean inside. The previously good oil pressure has been dropping off lately. The cylinder compressions are 120-126 lbs. with one exception of 135 lbs.*

*Could this noise be in the oil pump?*

*Lloyd E. Leigher  
Staples Amoco Station  
Thomaston, Maine*

**F**ROM your description of this noise it could be from the oil pump relief valve or possibly from blowby. I would suggest checking the oil pump first and then removing the pistons, to check the rings and bearings.



## MOTOR AGE FLAT RATE AND SERVICE MANUAL





Parts department is well-lighted making it easy for attendant to read labels on the shelves. Show case lighting, below the display counter, uses reflectors.



Important part of any garage is the order desk. One hundred footcandles of light fall on the desk from fixtures similar to the lights in the control tower.

**No more shadow boxing . . .**

# Prescription for Efficiency

**Whether you own, lease or rent your service shop, here is a sound discussion of modern lighting requirements for individual garages**

**by E. A. Lindsay, Illuminating Engineer—General Electric Co.**

**W**HILE it goes without saying that your mechanics cannot work in the dark, this obvious wisdom is often disregarded in the typical garage. Owners and mechanics are often misled by the wonderful adaptability of their eyes into "shadow boxing" needlessly.

And in these days of high taxes, high labor costs, the shortage of skilled labor, and stiffer competition, the progressive automotive repair shop owner knows that he must look out for his mechanics' welfare as well as increase their effi-

ciency and productivity if he is to continue to operate at a profit.

Fortunately, there is a method of accomplishing this which has the advantage of being relatively simple, inexpensive, and highly flexible. This is through the application of practicable lighting techniques to the specific lighting needs of individual garages.

The man who owns or leases his shop is in a position to consider the many advantages of completely revamping his lighting installation.





**Above:** General service area receives 30 footcandles of lighting. **More lights** are located over car hoods. **Right:** Twin hoist lights are water-tight and impervious to oil. **Below:** pit lighting by recessed units.

He can get the most benefits from a new lighting system. But even for the man who rents garage space, the techniques of good lighting are so flexible that he can get very good results with portable and semi-portable equipment. As a matter of fact, combinations of portable and permanent equipment are necessary for every well lighted garage or repair shop.

One way to analyze your lighting needs is to study your floor plan and the specific work areas of your shop. Once you have decided upon the most efficient assignment of work spaces, an effective lighting system can be designed. While you will probably want an illuminating engineer or a qualified electrical contractor to give you professional advice, it is helpful if you understand some of the fundamentals of good lighting.

Merely providing more light for your mechanics will not necessarily increase their working efficiency. A lighting installation must provide enough light of the right quality in the

*(Continued on page 90)*





Mechanic (right) will call in both the department manager and the service salesman if additional repairs appear necessary on the car in for service.

## Specials Well Advertised Can Keep Your Mechanics Busy

"Keep reminding the public of what you are doing, what you can do, and what you expect to be doing" advises the service manager of this Texas dealership

While mechanic works on another section of the car, a service salesman will personally point out to a customer any other items obviously needing repair.



**I**S there a connection between cherry pie and a front-end special? There was just the other month for Kuykendall Chevrolet in Lubbock, Tex.

By promoting a "Cherry Pie Special" through advertising in local and neighboring communities, this dealership upped its front-end dollar volume for that month 40.7 per cent.

"You have to keep reminding the public of what you're doing, what you can do, and what you expect to be doing," is the way service manager Holland Graves, of Kuykendall puts it. "Otherwise, the public will just overlook thinking of you."

In the recent "Cherry Pie Special" Kuyken-  
(Continued on page 98)

## Shop Customers Demand

# Car Washing Service

Why and how a new car dealer in New Jersey's capital city  
puts automatic car washing equipment to best advantage

**A** CAR washing service is a MUST today," says Frank L. Reese of Trenton. "The man on the street won't be a customer for lubrication or for service unless he's sure his car can be washed at the same time."

Owner of the Reese Buick Corp. located in New Jersey's capital city, Reese backs up these observations with nearly a quarter century of

used and new car dealership experience.

In his present new car dealership in Trenton—he bought it in October of 1952—Reese makes use of two automatic car washing machines. One is used solely for new car make-ready and is housed in Reese's 45,000 sq. ft., two-story New Car Preparation building. Location is

*(Continued on page 104)*



by William H. Wolfe  
Managing Editor

Owner Frank Reese and his service manager Roy Wilson (left) observe operation of an overhead elevator-spray mechanism.

Main location of this large volume dealership is just off Trenton Freeway route.



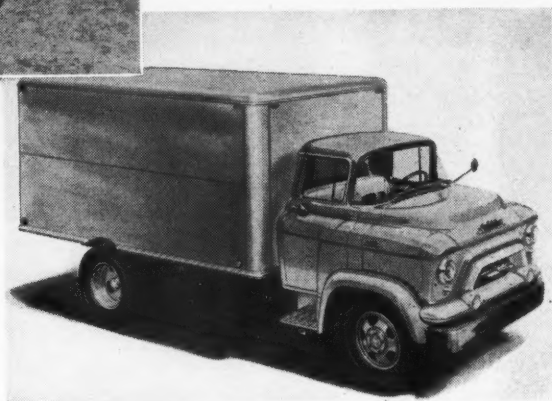




**Left:** New light-duty GMC pickup can do a hard day's work (with V-8 or 6 cyl. engine) on farm or in city.

**Below:** With a bumper-to-back-of-cab length of only 89 in., this 350 GM truck has big payload capacity.

**Bottom:** A new type of ventilating system provides a better distribution of hot and cold air in the cab.



# GMC

## Introduces

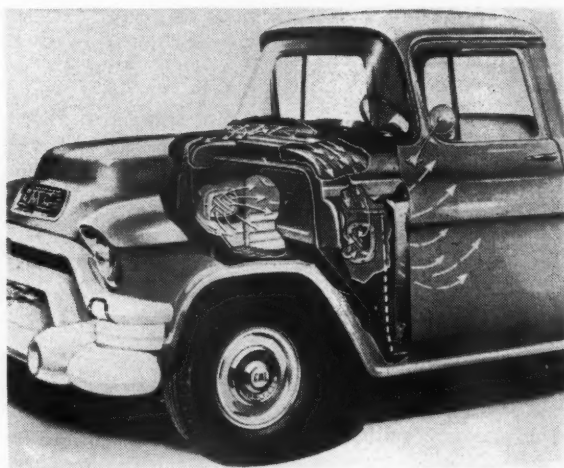
# "Blue Chip" Trucks

More than doubling the number of models offered last year, General Motors adds new V-8 engines to its 1955 truck line

**A** COMPLETE line of 128 new 1955 GMC truck models, featuring units powered by V-8 engines, a new concept in streamlined design and some 500 major styling and engineering improvements, have been introduced by GMC Truck and Coach Division.

More than doubling the number of models offered in 1954, the new line brings seventy-four entirely new models into the GMC family of light, medium and heavy-duty vehicles.

The engineering and styling changes in the new GMC trucks offer many features. The new models are being called GMC's "Blue Chip" trucks in the largest advertising campaign ever staged by the division.



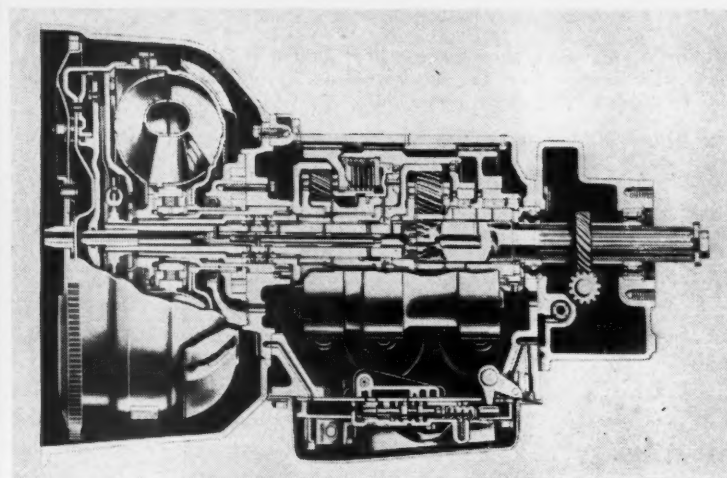
Other highlights of the new line include a new series of lighter weight Diesel trucks, expanded use of Hydra-Matic transmissions, and a unique dual-purpose series combining the advantages of cab-over-engine and conventional

*(Continued on page 108)*

**Right:** The new Dodge G model has gross vehicle rating of 15,000 lb; is powered by a 169 hp, V-8 engine.

**Lower right:** One of two automatic transmissions offered as optional equipment is "Super Truckomatic."

**Below:** New styling of Dodge line includes convenient location of controls for driver's easy reach.



## DODGE '55 Truck Line

Featuring higher power and new styling, Dodge Division makes available two types of automatic transmissions, five V-8 engines

**C**HRYSLER'S "Forward Look" has been extended into its commercial vehicles as well as its passenger models. The new 1955 line of Dodge trucks offers a variety of types and body styles.

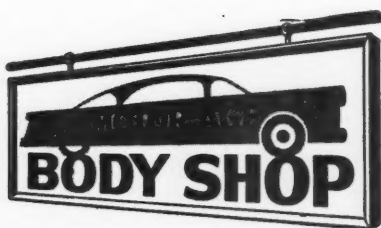
Two types of automatic transmissions are

offered as extra equipment as is a new overdrive. The overdrive is available with the standard three-speed transmission for one-half ton models.

Dodge trucks range from one-half ton through four tons. Maximum GVW ratings are 4250 to 40,000 lb. At the same time, the range of GCW ratings extends to a maximum of 60,000 lb.

In general, the '55 Dodge line provides greatly improved power and torque; entirely new styling features; a group of four new cabs with wraparound windshield and rear window—providing about 98 per cent circular vision, and the use of power steering and power brakes

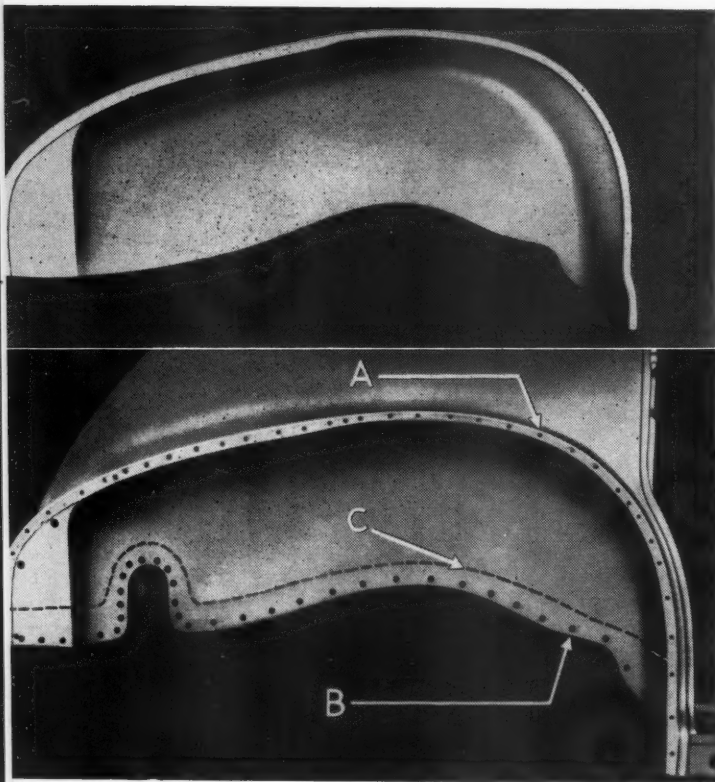
*(Continued on page 112)*



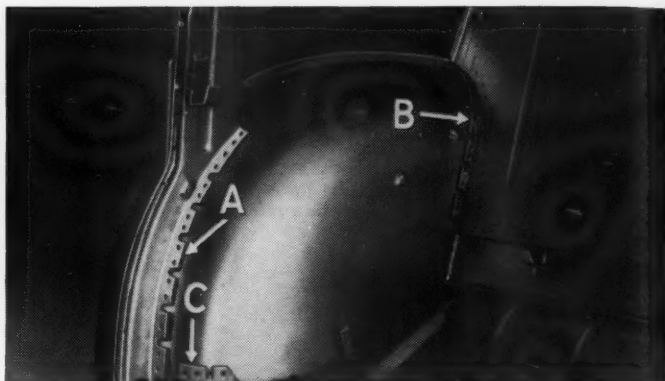
by R. C. Rittenhouse,  
Associate Editor

A new wheel house section (top) is furnished as a blank panel with no cut outs. The repairman must scribe and cut the blank to a proper fit.

(Below) This shot shows the wheel house in position after preparation for final welding. C indicates the location of the floor panel pan.



**Increase your shop profits by using the step by step procedures outlined here. These tried and true methods produce a good finished job quickly and easily**



Looking from inside, the wheel house can be seen in position at the hinge pillar. Arrows indicate the various welding points along the edges.

## Replacing

**B**ODY PANELS needing repairs due to accidents and rust require roughly the same basic procedures when they are being repaired or replaced. To illustrate the work as done on older models we are using photographs of the popular, high production 1946-48 General Motors bodies.

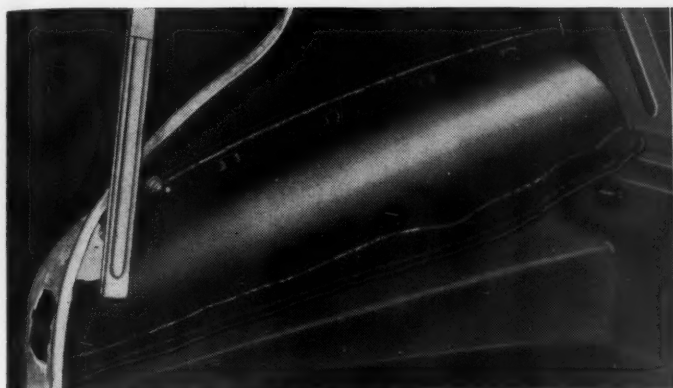
Since there are approximately three and a quarter million of these models still on the road a good market for body shop work can be found in them alone. This is the best reason we know for pinpointing even a small section of this particular body style.

### Replacing Rear Wheel Housing

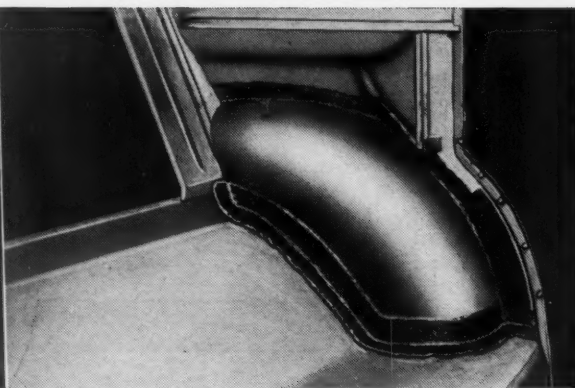
The first step in replacing the rear wheel housing is to raise the body off the chassis and block it up to an even plane. This precaution taken before removal of a damaged panel will help prevent misalignment troubles later. After the underbody has been blocked to a level position pull the wheel. Then remove the fender, bumper and gravel deflector.

If the spare tire and luggage shelf in the rear compartment interferes with the job take them out along with the floor mat. Any of the compartment's side wall trim next to the damaged section should be removed also. To prevent fire, the rear seat and back cushions should be taken





View of the wheel house from inside the trunk after repairs and before the pad and tail light assembly have been reinstalled.



Another inside view showing the wheel house at the hinge pillar after finishing operations. Sealer has already been applied where needed.

# GM Rear Body Panels

out. Next, remove the rear quarter lower trim pad, window garnish molding, handles and so on. To complete the preliminary steps take out the tail lights and all wiring in that area.

Now, from inside the car locate and center punch each spot weld along the curved face of the wheel housing. Drill out the core of the welds with a quarter inch drill. From outside the car, follow the same procedure on the welds that hold the housing to the quarter panel as well as any spots on the small brackets found in this area. Pry the damaged housing from the panel. After making all necessary repairs and straightening on the body floor pan, clean the surface and prime coat these areas.

To turn attention to the new wheel housing blank for a moment, it will be noted that the new section is furnished without cutouts or holes. These will have to be cut or drilled to fit by the repairman.

In preparing the new panel for installation it is best to use the wrecked one if possible as a template. To do this, lay the old one on top of the blank and scribe a line along the lower skirt that will permit the new panel to fit the contour of the floor pan. On the left side scribe around the gas tank filler opening.

Use of the proper tools and extra care when cutting and trimming the new panel will help

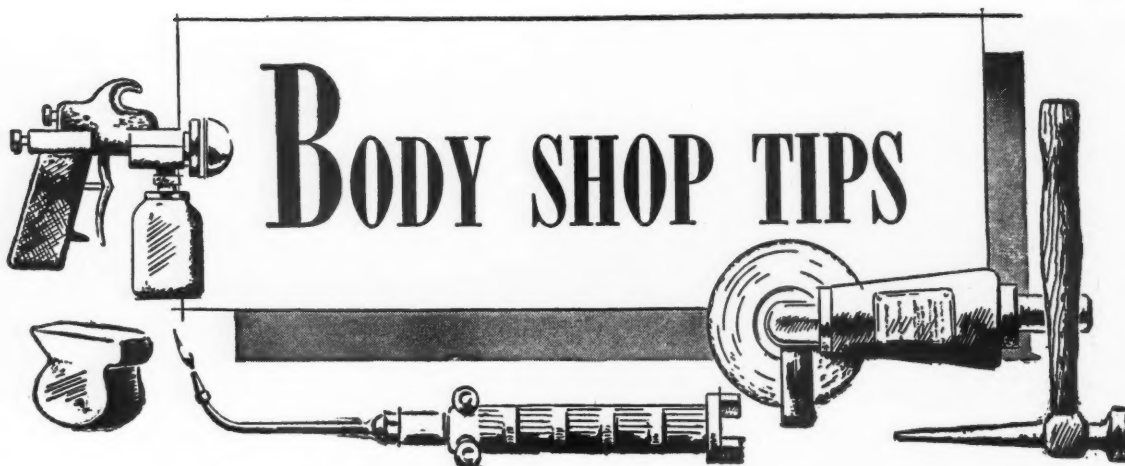
prevent undercutting the sheet metal.

After trimming operations are complete, position the new wheel housing into the body opening. As this is done the flange should overlap and fit into the flange of the upper quarter panel. Line the two sections up properly and temporarily secure them along the side face with sheet metal screws.

*(Continued on page 126)*

The bottom edge of the rear quarter panel is shown being ground off to permit easy removal of the cut out section that is being replaced.





## BODY SHOP TIPS

are worth

# \$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

### Repair Worn Windshield Wiper Linkage on GM Cars

Here is an inexpensive and quick repair method to use when the ball and socket separate on windshield wiper linkage. Remove the linkage assembly unit, then grind and punch the ball from the arm. Drill a hole big enough for a small rivet to go through the arm and the link on the wiper transmission. Then drill a hole in the rivet and put a cotter pin in it and replace it on the car. *Melvin E. Blodgett, 1027 Clark St., Albion, Mich.*

### Pieces of Glass Helpful In Matching Paints

When in the process of matching colors for automobiles or

trucks we have on hand a few pieces of thin plate glass about two inches wide and three inches long. We mix the colors and dip a piece of glass into the paint. We let it dry then hold it against the job where the color is to be used. This method shows if the colors are correct. *Anthony L. DeCesare, 31-06 36th Ave., Long Island City, New York.*

### Masking Tape Cutter Made from Metal Strip

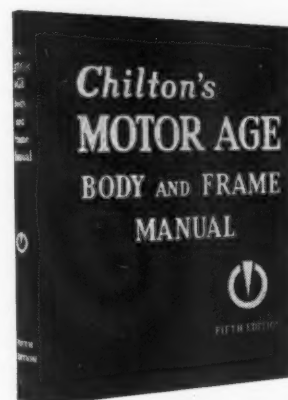
Most users of masking tape would like to be able to tear a piece of tape with a clean square edge. I made a cutting edge clip that fits on the roll and is always ready to make a clean cut. Using any thin, fairly soft metal, bend it into a



shape as shown. Sharpen one edge before placing on the roll. Spread the opening to allow room for placing the cutter on the roll. When in place bend back to keep the cutter on the roll. Hold the cutting edge tight against the roll, at the point that the cut is to be made and then pull the loose end against the cutting edge. *A. R. Tanner, RFD No. 1, Cold Spring, N. Y.*

### Sticks of Solder Used To Force Hood Forward

After a light front end collision, difficulty is occasionally had in releasing the hood latch. If the lower striker plate has been driven back, it is quite simple to insert a long tool through the grille openings and drive the striker bolt back to release it. If the plate has shifted forward, it is impossible to reach in and pull the striker bolt. I pry the entire hood assembly forward by opening the front doors, placing one or two sticks of body solder at the rear edge of the hood where it lies adjacent to the door, and then close the door against the solder. This will effectively force the hood ahead without marring the finish at the door and hood edges. *John R. Butler, Gladiolus Court, Ft. Myers, Fla.*



Other valuable information of the type presented each month in **The BODY SHOP** is available in **Chilton's Motor Age Body and Frame Manual**.

# Up-To-Date Body Parts Price List

## 1954 Various Models

### Plymouth

Front Bumper Buffer Plate— 1551759 .....	5.45
Front Bumper Face Bar— 1329450 .....	32.95
Bumper Rear Supt. Bar, right—1551103 .....	5.75
Radiator Upper Cross Bar— 1494701 .....	2.25
Bumper Stone Deflector— 1541331 .....	7.20
Hood Top Ornament—1494713 .....	....
Hood Top Panel—1540929...	37.45
Top Hood Panel Mldg., front —1494709 .....	3.95
Hood Lock Assy., up.— 1494860 .....	1.95
Hood Lock Assy., low.— 1435203 .....	2.15
Radiator Supt. to Fender Yoke—1435235 .....	8.65
Radiator Core Assy., std.— 1494108 .....	....
Radiator Core Assy., Hy.-Dr. —1494643 .....	70.95
Radiator Core Assy., Torque Conv.—1494644 .....	81.75
Front Fender, right—1494775	29.95
Deck Lid—1542964 .....	48.50
Rear End Lower Panel— 1433374 .....	9.85
Fuel Tank Assy.—1405107...	34.50
Rear Bumper Face Bar— 1450248 .....	....
Rear Bumper Stone Deflector —1551746 .....	7.95
Rear Bumper Face Bar Supt. —1550242-3 .....	....
Deck Lid Weatherstrip— 1432662 .....	5.85
Deck Lid Hinge, right— 1458058 .....	5.43
Deck Lid Handle—1542964...	48.50
License Lamp Body—1546445	3.20
Frame Assy., std., exc. conv. —1536039 .....	136.55
Frame Front Crossmember— 1328250 .....	30.17

### Pontiac

Folding Top Lift Cylinder— 4615148 .....	14.00
No. 1 Bow Hinge, right— 4597152 .....	4.30
Bow Slat Iron—4630377.....	2.40
Auxiliary Bow Link, right— 4616457 .....	15.75
Side Roof Rail, right— 4614966 .....	....
Front Roof Rail—4602575...	33.85
Top Auxiliary Bow, front— 4596782 .....	5.65

### Pontiac—continued

No. 1 Center Bow—4614592..	8.00
Top Rear Bow—4630378.....	11.45
Rail Control Link, right— 4616457 .....	15.75
Rear Quarter Window Glass —4600839 .....	8.85
Front and Lower Channel— right—4150642 .....	17.20
Sash Channel Filler, (.032") —603954 .....	2.20
Quarter Window Guide, right —4601059 .....	4.05
Quarter Window Regulator, right—4598503 .....	4.40
Quarter Window Hinge, right —4606826 .....	2.90
Convertible Door Assy., right —4200416 .....	58.05
Convertible Door Window Glass—4602629 .....	13.25
Convertible Door Vent. Glass —4602799 .....	4.25
Conv. Window Division Chan., right—4191710 .....	4.10
Door Vent. Wthstp.—4154776	4.35
Vent. Glass Chan.—4191704..	7.00
Door Window Regulator, right—4596388 .....	6.65
Tail Lamp Assy.—927995....	....
Back-Up Lamp Assy., left— 928277 .....	4.95
Back Window Glass—4616100	35.95

### Studebaker—2 Door

Headlamp Rim, Chrome— 298011W .....	3.75
Sealed Beam Unit—272586...	1.65
Headlamp Body—297578P ...	3.25
Headlamp Assy.—297576 ....	10.50
Front Hood Emblem, V— 304823 .....	2.40
Hood Top Ornament— AC-2610 .....	8.25
Windshield Glass Rubber Chan.—1942X1 .....	5.00
Roof Drip Mldg., right— 302736 .....	1.10
Front or Rear Wheel—529132	13.75
Wheel Hub Cap—532324.....	2.95
Door Assy., right—302980...	58.50
Radiator Grille Bar, right— 306098 .....	16.75
Quarter Window Glass & Frame, right—304646 .....	12.50
Quarter Panel Mldg.—303568	3.50
Dash Panel—299610 .....	24.00
Cowl Side Panel, right— 299222 .....	23.50
Sill Panel, right—298608....	4.25
Rear Quarter Panel Kit— 304658 .....	45.00

### Studebaker—continued

Wheelhouse & Deck Side Panel, right—304668 .....	19.50
Deck Lid Sill Plate Kit— 304657 .....	5.50
Deck Lid—306157 .....	46.00
Roof Panel Kit—304654.....	77.75
Frame Assy. Model Y—535470	107.50
Frame Front Crossmember— 532729 .....	17.49
Engine Supt. Crossmember— 534732 .....	9.75
Gas Tank Crossmember, exc. D—531951 .....	4.50
Gas Tank Crossmember, D— D—534066 .....	4.95

### Willys

Front Bumper Face Bar— 803965 .....	21.77
Front Bumper Guard—803700	5.87
Front Bumper Inner Arm— 803986 .....	2.96
Front Bumper Outer Arm— 803988 .....	....
Front Bumper Stone Deflec- tor—676084 .....	2.95
Grille, Up. & Low. Panel Assy.—688116 .....	57.00
Grille, Center Bar (Chrome) 676475 .....	20.19
Grille Bar Emblem—679259..	1.50
Parking Light Assy.—803773	3.46
Parking Light Bezel—119204	1.34
Headlight Assy.—803476 ....	9.24
Headlight Door—649518 ....	1.86
Headlight Housing Assy.— 642029 .....	3.03
Headlight Mtg. Ring Unit— 640834 .....	1.82
Front Outer Wheelhouse Panel—676405 .....	16.93
Sill & Inner Panel, left— 676531 .....	52.52
Front Suspension Supt. Bracket—676402 .....	13.41
Front Body Hinge Pillar— 676331 .....	11.28
Dash & Toe Panel—676394...	21.73
Roof Rail & Drip Mldg.— 676227 .....	15.66
Roof Panel Assy., Custom— 678265 .....	114.06
Rear Deck Lid—676501.....	20.91
Rear Sill Member—676022...	2.75
Fuel Tank Assy.—809433....	16.55
Rear Quarter & Extension Panel—676145 .....	37.50
Rear Quarter Lock Pillar, left —676265 .....	6.52
Body Rocker Panel, left— 676243 .....	4.67



# Current Engine and Tune-up Specifications

MAKE AND MODEL	ENGINE				TUNE-UP DATA										STEERING												
	No. of Cylinders Bore and Stroke	Taxable H.P.	Piston Displacement (Cu. In.)	Compression Ratio	Spark Plug Make and Type	No. and Width		Rings	VALVES				IGNITION			Caster (Deg.)	Camber (Deg.)	Toe-In (In.)	At King Pin Inclination at Camber (Degrees)								
						No. and Width	Compression		Inlet	Exhaust	Seat Angle	Stem Diameter (In.)	Operating Tappet Clearance		Deg. Inlet or After T.C.					Timing Marks	Breaker Point Gap	Cam Angle (Deg.)	Spark Plug Gap	Spark Occurs	Timing Marks	Timing Location	
													Inlet	Exhaust													
Buick	V8-40 V8-50, 60 V8-70 V8-80, 82, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20 46-50 45-50 45-50	264.0 322.0 322.0 322.0 322.0 322.0	188-4800† 238-4800 238-4800 238-4800 238-4800 238-4800	(a) 9.0 9.0 9.0 9.0 9.0 9.0	AC-44-5 AC-44-5 AC-44-5 AC-44-5 AC-44-5 AC-44-5	2-1/2 2-1/2 2-1/2 2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2 2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2 1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2 1-1/2 1-1/2 1-1/2	45 45 45 45 45 45	45 45 45 45 45 45	Hyd Hyd Hyd Hyd Hyd Hyd	Hyd Hyd Hyd Hyd Hyd Hyd	.004 .004 .004 .004 .004 .004	25B 25B 25B 28B 19B (e)	FDP HB HB HB FV (f)	.015 .015 .015 .015 .016 .019	NR NR NR NR TC TC	.033 .033 .033 .033 .036 .036	5B 5B 5B 5B TC TC	FDP FDP FDP FDP FV FV	6 6 6 6 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2 0 to 1/2 0 to 1/2 0 to 1/2	0 0 0 0 0 0
Cadillac	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	AC-44-5 AC-44-5 AC-44-5	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.004 .004 .004	25B 25B 28B	FDP HB HB	.015 .015 .015	NR NR NR	.033 .033 .033	5B 5B 5B	FDP FDP FDP	6 6 6	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Chevrolet	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	AC-44-5 AC-44-5 AC-44-5	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.004 .004 .004	25B 25B 28B	FDP HB HB	.015 .015 .015	NR NR NR	.033 .033 .033	5B 5B 5B	FDP FDP FDP	6 6 6	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Chrysler	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	AC-44-5 AC-44-5 AC-44-5	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.004 .004 .004	25B 25B 28B	FDP HB HB	.015 .015 .015	NR NR NR	.033 .033 .033	5B 5B 5B	FDP FDP FDP	6 6 6	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Ford	V8-40A, 40B V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20 51-20	264.0 322.0 322.0 322.0	188-4800† 238-4800 238-4800 238-4800	(a) 9.0 9.0 9.0	CH-870 CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2 1-1/2	45 45 45 45	45 45 45 45	Hyd Hyd Hyd Hyd	Hyd Hyd Hyd Hyd	.016 ER ER ER	12B 13B 12B 28B	VD VD VD FV	.015 .025 .020 .020	27 37 39 39	.034 .034 .032 .030	6B 3B TC TC	CP VD VD FV	5 4 5 7	1/2 P to 1/2 P 1/2 P to 1/2 P 1/2 P to 1/2 P 1/2 P to 1/2 P	1/2 P to 1/2 P 1/2 P to 1/2 P 1/2 P to 1/2 P 1/2 P to 1/2 P	1/2 to 1/2 1/2 to 1/2 1/2 to 1/2 1/2 to 1/2	7-7 7-7 7-7 7-7
Hudson	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 0.010 0.010	12B 12B 33B	VD VD FV	.025 .020 .020	37 39 39	.034 .032 .030	3B TC TC	VD VD FV	4 5 5	1/2 P to 1/2 P 1/2 P to 1/2 P 1/2 P to 1/2 P	1/2 P to 1/2 P 1/2 P to 1/2 P 1/2 P to 1/2 P	1/2 to 1/2 1/2 to 1/2 1/2 to 1/2	7-7 7-7 7-7
Lincoln	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 ER ER	12B 12B 12B	VD VD VD	.015 .027 .034	27 37 (n)	.034 .034 .034	5B 5B (n)	VD VD VD	5 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Mercury	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 ER ER	12B 12B 12B	VD VD VD	.015 .027 .034	27 37 (n)	.034 .034 .034	5B 5B (n)	VD VD VD	5 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Nash	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 ER ER	12B 12B 12B	VD VD VD	.015 .027 .034	27 37 (n)	.034 .034 .034	5B 5B (n)	VD VD VD	5 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Nash-Hudson	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 ER ER	12B 12B 12B	VD VD VD	.015 .027 .034	27 37 (n)	.034 .034 .034	5B 5B (n)	VD VD VD	5 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Oldsmobile	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 ER ER	12B 12B 12B	VD VD VD	.015 .027 .034	27 37 (n)	.034 .034 .034	5B 5B (n)	VD VD VD	5 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Packard	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 ER ER	12B 12B 12B	VD VD VD	.015 .027 .034	27 37 (n)	.034 .034 .034	5B 5B (n)	VD VD VD	5 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Plymouth	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 ER ER	12B 12B 12B	VD VD VD	.015 .027 .034	27 37 (n)	.034 .034 .034	5B 5B (n)	VD VD VD	5 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Pontiac	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 ER ER	12B 12B 12B	VD VD VD	.015 .027 .034	27 37 (n)	.034 .034 .034	5B 5B (n)	VD VD VD	5 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Studebaker	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 ER ER	12B 12B 12B	VD VD VD	.015 .027 .034	27 37 (n)	.034 .034 .034	5B 5B (n)	VD VD VD	5 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0
Willis	V8-60, 62, 75 V8-1500, 2100, 2400 V8-1500, 2100, 2400	42-50 51-20 51-20	264.0 322.0 322.0	188-4800† 238-4800 238-4800	(a) 9.0 9.0	CH-870 CH-870 CH-870	2-1/2 2-1/2 2-1/2	2-1/2 2-1/2 2-1/2	1-1/2 1-1/2 1-1/2	1-1/2 1-1/2 1-1/2	45 45 45	45 45 45	Hyd Hyd Hyd	Hyd Hyd Hyd	.010 ER ER	12B 12B 12B	VD VD VD	.015 .027 .034	27 37 (n)	.034 .034 .034	5B 5B (n)	VD VD VD	5 5 5	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	1/2 N to 1/2 P 1/2 N to 1/2 P 1/2 N to 1/2 P	0 to 1/2 0 to 1/2 0 to 1/2	0 0 0

**ABBREVIATIONS**  
\*—8.25 after first 5,000 units.  
†—Equipped with opt. Dyn. trans.  
‡—Equipped with opt. Dyn. trans.  
§—180-4000 with opt. Dyn. trans.  
||—With heater.  
¶—177-4400 with opt. barrel carburetor and dual exhaust.  
§—035 after first 5,000 units.  
(a)—7.5 with std. trans.; 8.4 with Dyn. trans.  
(b)—8.4 with std. trans.; 9.0 with Dyn. trans.  
(c)—164 with std. trans.; 184 with Dyn. trans.  
(d)—123-3800 with std. trans.; 136-4200 with Dyn. trans.  
(e)—1A with std. trans.; 104-5B with Powerglide trans.  
(f)—12B with std. trans.; 18B with Powerglide trans.  
(g)—133-4400 with std. trans.; 198-4400 with Fordomatic trans.  
(h)—8.1 with std. trans.; 8.5 with Fordomatic trans.  
(i)—140-4000 with dual carburetors.  
(j)—AL-A-71 with dual carburetors.  
(k)—AL-A-71 after first 5,000 units.  
(l)—1P to 1P with power steering.  
(m)—With heater.  
(n)—177-4400 with opt. barrel carburetor and dual exhaust.  
(o)—035 after first 5,000 units.  
(p)—7.5 with std. trans.; 8.4 with Dyn. trans.  
(q)—8.4 with std. trans.; 9.0 with Dyn. trans.  
(r)—110-4000 with dual carburetors.

**STEERING**  
A—After.  
AC—A. C. Spark Plug Div.  
AL—Electric Auto-Life Co.  
B—Before.  
C—Cold.  
CB—Crankshaft balancer.  
CDP—Crankshaft drive pulley.  
CH—Champion Spark Plug Co.  
CP—Crankshaft pulley.  
ER—End of ramps used for timing.  
FDP—Fan drive pulley.  
Fly—Flywheel.  
H—Hot.  
HB—Harmonic balancer.  
Hyd—Hydraulic valve lifters, zero clearance.  
N—Negative.  
NR—Use not recommended by Buick.  
NS—Not specified.  
NU—Not used.  
P—Positive.  
TC—Top center.  
VTS—Vibration damper.  
VTS—Valve train solid.

(Advertisement)

**OPPORTUNITY  
UNLIMITED**  
*A Studebaker  
case history*



Out Iowa way...  
*they're betting on  
young Studebaker dealer*

## DEENE PETERSON

*He is only 31... and he  
has just acquired a fine  
Studebaker franchise!*

UP IN the northeast part of Iowa, a young man named Deene Peterson has just opened a Studebaker dealership in the town where he was born.

This town is called Waukon—and chances are you never even heard of it. But our guess is it won't be long before every car owner in his area hears a lot about Studebaker Dealer Deene Peterson.

We say this because we did a thorough job of sizing him up before we signed him up. His whole record shows that he has what it takes to be outstandingly successful in his chosen career.

Now only 31, Deene Peterson has had his sights set for seven years on owning a Studebaker dealership. He took the first step toward reaching his goal by becoming a retail automobile salesman in his own home town right after leaving Iowa State College. He made good at that—and then he branched out and opened up his own service and repair shop. All this gave him solid standing and acceptance in

the community—and, more importantly, an on-the-job understanding of both the selling and the maintenance problems that every active automobile dealer meets up with every day.

Time marched on—and late last year, Deene Peterson felt ready for his next move forward. He decided to make a try for the Studebaker dealership he had long aspired for. Studebaker had just teamed up with Packard and was looking for up and coming young men such as Deene Peterson for additional dealers. We got together without difficulty—and now Studebaker has Peterson Motor Sales of Waukon, Iowa as one of its most promising newly established dealerships.

It's bound to be a winning combination, we think—and so, apparently, do Deene Peterson's neighbors in and around Waukon. They are confident they will see young Deene Peterson become one of America's outstanding small-town Studebaker dealers in just a very short while.

**Salesmen and sales managers—successful service department managers, too—are invited to inquire about the opportunities open for strong Studebaker dealerships in good territories.**

You don't need a fortune in cash capital. It takes far less money than you think to get started in a Studebaker dealership of your own.

If you are a man of recognized integrity with a proved record of success as a salesman of automobiles or allied products—and can show evidence of administrative ability—you are invited to enter into negotiations for a Studebaker franchise. Address William A. Keller, General Sales Manager, Studebaker Division, Studebaker-Packard Corporation, South Bend 27, Indiana.

## STUDEBAKER

Studebaker Division of the  
Studebaker-Packard Corporation  
... one of the 4 major full-line producers  
of cars and trucks

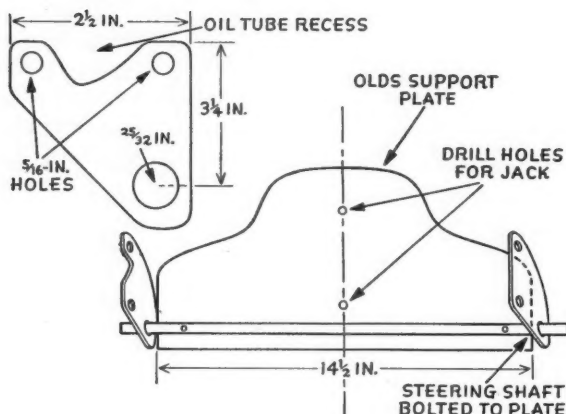
# \$25 ShopKinks \$7.50

TIME AND WORK SAVING IDEAS ON CARS AND TRUCKS CAN PAY OFF. SEND YOURS IN NOW!

If you have an original idea for a special tool, a short cut on a job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age. If your Kink is used it may bring you \$7.50 or \$25. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

## \$25

### 'In the Car Hoist' Handy For Removing Transmissions



In the past we have had difficulty in removing the Power Glide transmission from 1953 and earlier model Chevrolets. First I fasten the device to a floor jack. Then two plates are bolted to the sides of the transmission at the converter housing for removal. The transmission is slid under the car while resting on the "hoist." From a position over the opening in the car floor a man is able to pivot the transmission while a man underneath jacks up the unit and slides it into place for installation. *Lawrence Cunningham, Larry's Auto Shop, 1326 Mechanic St., Phila. 38, Pa.*

### Puts Oil on His Hands, Gets Easier Washup Later

A squirt or two of oil rubbed on a mechanic's hands before tackling a dirty, greasy job, will save a lot of wash-up time. It prevents dirt from entering the pores where it's hard to scrub out. *Frank M. Girdwood, P. O. Drawer 2038, Pittsburgh, Penna.*

### Mirror Saves Time When Checking for Water Leaks

If water is getting into an engine, it is advisable to determine the cylinder causing the trouble before tearing it all down. Often this is hard to do if there is only a slight coolant leakage. My method is to remove the spark plugs and turn the engine over with the starter while holding a hand mirror near each spark plug hole. Excessive moisture on the mirror will show the cylinder at fault. *J. W. McGill, Wright Truck Line, 210 1st St., Stayton, Oregon.*

### Metal Screw Keeps Turn Signal from Slipping

Several 1953-54 Chevrolets have been brought in to our shop because the turn signal would not cancel out. We found that in these cases the turn signal housing had  
(Continued on page 72)



Top performance...low cost...Perfect Circle gives you both!

# 1<sup>ST</sup> 2<sup>ND</sup>



Perfect Circle's 2-in-1 Chrome set provides the finest piston ring equipment obtainable! For the 2-in-1 set has both the *top* ring and the *oil* ring plated with thick, solid chrome. The entire area of ring travel gets complete wear protection, *more than doubling* the life of cylinders, rings and pistons. Thousands of extra miles of sustained power and positive oil control are assured. And, with Perfect Circle chrome, no tedious break-in is necessary because rings are pre-seated at the factory.



Perfect Circle's Custom Made piston ring set enables you to furnish, regardless of make or age of the engine, a satisfactory installation at a low price. PC's sectional steel oil ring is supplied in sets for badly worn engines...cast iron oil ring in sets

for rebuilt or slightly worn engines. PC's Custom Made set is the outstanding bargain in price and performance.

Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto, Ontario.

**DON'T MISS YOUR DOCTOR OF MOTORS CLINIC** Doctor of Motors Clinics, sponsored by your PC Jobber, are packed with facts of great benefit to you. Don't miss your next opportunity to attend. For your added interest and enjoyment, you'll see the latest movie of the Indianapolis 500 Mile race.

## PERFECT CIRCLE

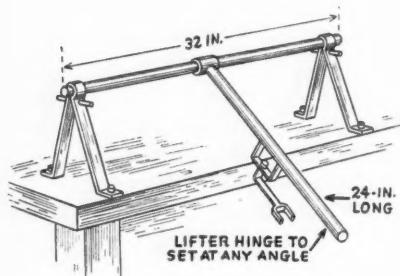
### piston rings

*The brand most people prefer*

slipped down. This can be prevented by drilling a small hole in the mast jacket just below the housing and installing a sheet metal screw. *Don Dixon, 4975 Collis Ave., S. Pasadena, Calif.*

## Device Makes Removal Of Valve Springs Easier

I have designed a tool to make it easier to remove the valve springs on overhead valve engines. When doing this job my arm holds the



sliding bar on my invention which in turn compresses the valve spring leaving both hands free to work the valve keys. The bar can be fastened to a workbench or to the wall above the bench. The hinge is four inches from the top bar and the lifter is approximately four inches from hinge. The hinge can be set at any angle desired. *J. P. Samuels, 724 Thayer Ave., Silver Spring, Md.*



Win This Original Painting  
See Page 37

## Short Cut to Remove Transmission Main Bearing

Ordinarily it takes about three hours to replace the front main bearing on a 1951 Ford F-6 synchromesh transmission, because you have to remove all mainshaft gears and the shaft through the rear of the housing. To speed up this job I have developed a short cut. Heat a spot on the inner race, cherry red and let cool (water can be used). As the race cools it will crack on the opposite side, allowing easy removal of the bearing. *Frank Pittinger, Frank's Service Center, Preston, Maryland.*

## Use Wire in Plug Covers To Attach Timing Light

Here's a handy idea for attaching a timing light on Chrysler built cars and all others that use shielded plugs and covers. Instead of disturbing the plugs and wiring, just push a sharpened piece of mechanic's wire under the rubber nipple, at No. 1 cylinder, on the distributor cap and attach the timing light to it. *K. E. Miller, Miller's Garage, Boody, Illinois.*

## Replaces Timing Gear Without Removing Camshaft

When replacing a Chevrolet timing gear we do not remove the camshaft. We break the fiber from the hub and with a sharp chisel split the hub at the keyway. Then, in replacing the gear, we drill a hole in the center of the camshaft and tap the hole 5/16 inch SAE. With a large washer we draw the gear into place. *Orin Weber, Weber's Garage, RR No. 2, Sun Prairie, Wisc.*

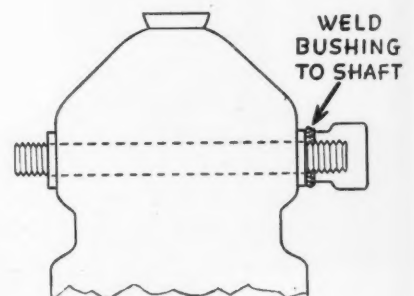
## Uses Trick to Remove Damaged Phillips Screws

Sometime the large Phillips head screws so commonly used on door striker plates become damaged or worn, making it impossi-

ble to remove them with the proper tool. In such cases it is often possible to solve the problem by electric welding a hex nut to the screw, with care being taken to keep the weld inside the nut. A suitable wrench can then be used to remove the screw. *Lynn F. Snoddy, 1622 Vivian St., Shreveport, La.*

## Welds Bushing to Pivot Shaft for Easy Removal

I find it very difficult to remove the upper inner pivot shaft on 1949 to 1953 Chevrolet front suspension. To remedy this problem I weld a bushing to the shaft, after



the upper support is removed. The shaft can then be turned out with a ratchet. *Persyns Collision & Alignment Shop, Throop St., Palmyra, N. Y.*

## Expanding Shrunken Cork Gaskets to Normal Size

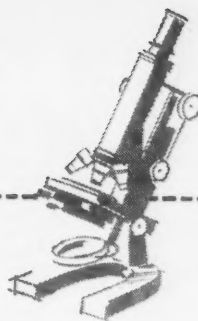
Wetting and pounding shrunken cork gaskets back to size usually wastes time and energy. I have found that if you simply put the gasket in the sun light or in front of a floor heater for a few minutes it will quickly expand to normal size. *Dick Webster, Webster Motor Co., Clifton, Arizona.*

## Book of Matches Useful in First Aid

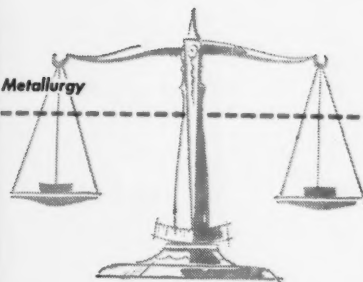
When someone gets carbon, grit, etc., in their eye a book of clean paper matches comes in handy. The torn end is ideal for removing it. It has saved us many tears. *B. R. Mitchell, Mitchell's Auto Service, Highway 17, Ridgeland, S. C.*



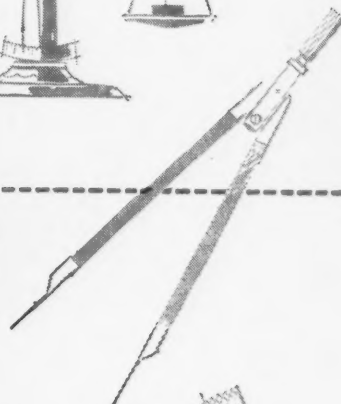
Research



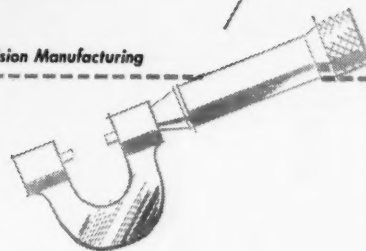
Metallurgy



Design



Precision Manufacturing



## *UNSEEN VALUES* are built into every **FEDERAL-MOGUL** engine bearing

Here you see a precision-made bearing for a specific job. What *can't* be seen in the bearing's background: Research, Design, Metallurgy, Precision Manufacturing, Service. These factors build bearings. They have made Federal-Mogul the *first choice* in replacement engine bearings!

*for New Power . . .*

# FEDERAL-MOGUL

*Oil-Control Bearings*



RESEARCH • DESIGN • METALLURGY • PRECISION MANUFACTURING • SERVICE

Chilton's MOTOR AGE, MAY, 1955







# 665,000 more reasons to hang this sign:

Independents who hang this easily recognized Genuine Ford Parts oval outside their shops can, this year more than ever, look forward to greatly increased Ford service business. That's because . . .

R. L. Polk & Co., official statistician for the automotive industry, estimates more than 665,000 Ford cars and trucks on the road in 1954 over 1953, a total of 10,393,512!

When their cars need service, Ford owners are on the lookout for the blue-and-white Genuine Ford Parts sign. For they know from experience that the independents who use the right replacements for their Fords . . . can be expected to service them *right*.

Why not make it clear to Ford owners that you're set up to take care of their special needs? Just clip and mail the handy coupon and see how easy it is to get a Genuine Ford Parts oval directing this bigger Ford business *your way* . . . at no cost to you!



**MAIL THIS COUPON NOW!**

**PARTS AND SERVICE SALES DEPARTMENT**  
Ford Division, Ford Motor Company, Box 658, Dearborn, Mich.

Please send me complete information telling me how independent garages can get a Genuine Ford Parts sign. I'd like to cash in on this, too!

FIRM NAME \_\_\_\_\_

INDIVIDUAL'S NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

H



# 1955 New Passenger Car Registrations by Makes by States\*

STATE AND MONTH	Buick	Cadillac	Chevrolet	Chrysler	De Soto	Dodge	Ford	Hudson	Kaiser	Lincoln	Mercury	Nash	Oldsmobile	Packard	Plymouth	Pontiac	Studebaker	Willlys	Misc. Dom.	Foreign	Total
Alabama.....Feb.	518	82	1323	83	56	176	1862	27		20	228	38	420	17	599	389	59	3	1	11	5,912
2 Mos.	1085	173	2227	181	121	379	3506	52		40	474	84	796	28	1218	793	122	13	2	23	11,317
Arizona.....Feb.	134	49	278	43	31	73	407	20	1	6	63	10	138	7	191	145	23	3		7	1,629
2 Mos.	226	83	419	70	49	123	624	32	3	13	101	19	235	10	313	217	28	6		12	2,583
Arkansas.....Feb.	379	71	1177	75	60	202	1336	16	1	16	213	30	388	15	457	341	66	7	1		4,851
2 Mos.	740	132	2324	182	126	404	2688	49	2	32	456	56	763	17	994	737	127	15	1	3	9,846
California.....Feb.	5928	1265	9088	1173	745	2056	9524	222	21	269	2954	401	3871	309	4017	3250	891	52	2	942	46,986
2 Mos.	11100	2796	15895	2427	1539	3812	17102	452	53	535	5787	833	7310	429	7501	6608	1648	134	5	1925	87,891
Colorado.....Feb.	326	92	735	116	46	145	807	37	2	24	216	35	295	17	303	253	69	2			3,539
2 Mos.	749	203	1533	281	126	322	1681	81	3	53	408	111	660	32	661	618	123	5	1	35	7,686
Connecticut.....Feb.	571	138	977	173	90	270	1271	53	3	18	249	81	469	53	629	455	96	8		90	5,694
2 Mos.	1301	345	2104	439	205	597	2543	110	4	55	551	219	1048	91	1433	1012	191	16		200	12,464
Delaware.....Feb.	161	38	376	30	25	70	371	1	1	5	73	8	99	8	114	109	17				1,518
2 Mos.	363	68	744	57	59	137	723	2	1	13	153	20	211	14	294	245	41	5	1	16	3,167
Dist. of Col.....Feb.	166	66	512	44	47	80	391	6	5	8	58	17	152	13	101	135	23	1		32	2,055
2 Mos.	351	135	943	104	83	173	761	15	5	16	148	49	339	20	661	294	43			122	4,174
Florida.....Feb.	1443	358	3106	294	191	442	3531	62	2	97	612	104	1173	64	1377	929	200	16	1	122	14,144
2 Mos.	2727	752	6439	605	394	904	7064	127	8	165	1189	189	2220	113	2736	1614	394	37	3	233	28,116
Georgia.....Feb.	1080	159	3101	175	122	475	3207	13	2	34	504	73	836	41	1075	975	188	10	5	29	12,104
2 Mos.	2657	420	6412	493	314	1146	6379	39	13	101	1180	182	1826	88	2343	2226	469	30	9	60	26,387
Idaho.....Feb.	212	48	325	53	45	86	306	12	1	10	84	15	116	8	142	152	51				1,674
2 Mos.	386	74	548	100	60	160	490	24	3	20	161	36	276	10	265	267	86	7			2,961
Illinois.....Feb.	4059	995	6684	1000	644	1362	7179	425	10	140	1645	419	3457	275	3530	2378	559	46	3	37	35,401
2 Mos.	7783	2099	10667	1997	1188	2734	12124	764	21	308	3282	877	6716	469	7180	4765	1020	67	46	127	64,192
Indiana.....Feb.	918	229	2204	220	176	409	2582	72	6	39	451	102	689	62	857	674	283	14	1	9	9,997
2 Mos.	2502	593	4688	659	542	1106	5622	156	12	99	1003	267	1818	103	2443	1803	734	41	1	23	24,217
Iowa.....Feb.	757	115	1763	186	119	301	1939	14	4	29	336	55	665	44	739	553	160	7	1	5	7,692
2 Mos.	1454	258	3404	378	255	722	3425	25	6	58	700	106	1315	60	1440	1163	243	13	1	14	15,068
Kansas.....Feb.	432	71	1121	81	43	153	1158	26	1	14	229	71	365	24	397	425	74	6		5	4,695
2 Mos.	1128	211	2092	235	153	413	2409	66	4	44	541	161	822	47	962	1020	163	17	1	8	10,587
Kentucky.....Feb.	609	86	1381	95	72	239	1436	22		13	219	56	425	38	526	377	100	6		5	5,705
2 Mos.	1160	171	2716	253	160	536	2609	46	2	25	417	101	779	60	1016	779	211	14	1	7	11,063
Louisiana.....Feb.	578	125	1757	121	98	279	2166	15	1	29	298	36	529	33	667	818	125	1		15	7,491
2 Mos.	1049	241	2902	255	202	502	3719	31	4	53	574	56	1034	43	1281	1176	227	5	1	20	13,375
Maine.....Feb.	98	16	319	21	15	57	254	9	1	2	54	18	78	9	124	87	28	2		8	1,200
2 Mos.	277	60	735	78	60	132	731	22	2	10	140	52	200	16	384	241	59	9	1	18	3,227
Maryland.....Feb.	800	127	1949	157	140	336	1776	34		22	273	62	551	41	824	539	120	9		25	7,785
2 Mos.	1626	284	3403	327	303	688	3145	80		39	544	122	1051	64	1768	1211	227	14		55	14,947
Massachusetts.....Feb.	1457	246	2628	324	248	433	2904	94	3	46	635	246	1389	85	1447	1084	165	10		88	13,532
2 Mos.	2714	502	4798	685	526	873	5785	171	7	99	1153	430	2468	141	2810	1967	285	29		184	25,627
Michigan.....Feb.	4843	1333	8667	834	579	1909	9332	177	4	145	1936	316	3284	287	3652	2926	368	31		59	40,662
2 Mos.	9177	2751	14890	1605	1112	3428	16823	286	19	319	3518	511	6003	419	6305	5624	630	52		110	73,582
Minnesota.....Feb.	942	168	1700	196	166	394	2280	47	4	39	470	73	923	54	832	664	173	18		10	9,171
2 Mos.	1759	378	2778	482	368	747	3977	111	10	75	876	138	1771	93	1652	1270	325	31		25	16,866
Mississippi.....Feb.	452	64	1152	80	78	131	1192	23	1	18	183	25	345	12	527	316	64	8			4,671
2 Mos.	823	134	1872	147	137	273	2090	31	2	30	334	40	578	16	994	636	104	12		4	8,257
Missouri.....Feb.	1229	246	2733	260	225	423	3235	29	2	44	640	93	1076	47	1395	1000	194	8	1	23	12,903
2 Mos.	2360	494	4302	519	457	834	6039	63	4	105	1200	203	2128	77	2742	1843	336	21	2	34	23,753
Montana.....Feb.	139	43	324	48	35	110	385	14		7	63	12	163	16	159	113	42	2	1	4	1,680
2 Mos.	270	87	690	74	50	181	616	27	1	16	115	19	296	22	251	173	77	5	1	4	2,975
Nebraska.....Feb.	588	77	870	105	88	186	1247	5	1	20	210	23	369	17	417	347	83	11		1	4,663
2 Mos.	1165	194	2213	261	162	447	2619	26	5	37	475	65	753	36	897	784	158	16		4	10,317
Nevada.....Feb.	69	18	141	34	21	41	151	1		8	36	10	65	10	59	84	60			11	799
2 Mos.	135	43	182	48	30	70	235	1		9	56	11	112	13	121	109	94			23	1,292
New Hampshire.....Feb.	57	5	145	10	9	22	168	10	1	9	33	12	53	5	74	52	10	1		4	680
2 Mos.	174	30	414	32	31	90	405	36	2	19	89	31	134	16	191	190	37	3		16	1,940
New Jersey.....Feb.	1577	350	2212	433	333	563	2623	54	6	50	811	97	1101	134	1532	990	226	19	1	77	13,189
2 Mos.	3633	880	4910	1121	849	1372	5506	157	13	129	1780	270	2752	212	3644	2537	464	41	1	166	30,439
New Mexico.....Feb.	203	31	426	47	28	77	413	5		8	83	11	162	5	127	166	41	1		6	1,840
2 Mos.	405	75	720	100	50	158	798	13	1	15	173	24	334	10	283	352	68	3		8	3,578
New York.....Feb.	4187	1075	7471	1311	811	1883	6439	187	24	195	1854	428	4030	273	4084	3165	514	72	2	420	38,425
2 Mos.	9225	2264	13989	3126	1889	4059	12490	325	46	388	3409	969	8751	555	9132	6312	1123	127	6	836	79,041
North Carolina.....Feb.	1066	168	2019	204	174	372	2488	35	2	29	389	50	735	44	745	800	129	20	1	23	9,373
2 Mos.	1765	330	3520	402	328	710	4304	57	6	63	674	81	1256	71	1385	1303	214	34	1	37	16,541
North Dakota.....Feb.	107	31	243	38	30	76	282	2		4	61	7	133	7	148	79	21	2			1,271
2 Mos.	239	70	379	103	86	184	521	6		10	143	24	294	19	356	213	46	4			2,697
Ohio.....Feb.	3573	782	5227	777	720	1395	7193	162	18	130	1641	270	2383	259	2761	2185	395	102	4	67	30,044
2 Mos.	6709	1599	8505	1621	1364	2915	12519	331	29	277	2948	523	4676	386	5520	4421	740	196	7	127	55,411
Oklahoma.....Feb.	783	126	1825	115	106	203	1836	34	1	30	370	62	676	25	578	627	98	4		8	7,507
2 Mos.	1190	207	2440	183	168	308	2629	58	2	48	564	83</									



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Alan Press, Traffic Manager of Screen Gems, Inc., TV subsidiary of Columbia Pictures Corp., tells:

## "Why Rin Tin Tin is never late!"

"Every Thursday, kids are waiting for Rin Tin Tin in Miami, Fla., and Bay City, Mich., and fifty-three other cities. They'd be awfully disappointed if he didn't show up.

"How do we get him there? It's simple," says Alan Press.

"We ship him on film — by Air Express. We also meet rigid schedules for our other TV network shows: Ford Theater, Captain Midnight and Damon Runyon Theater. All

told, over 200 unbreakable dates to meet every week.

"Using Air Express *exclusively*, we've never missed a single show!

"Yet, we save real money with Air Express. It costs \$3.78, for instance, on our typical 10-lb. shipment from New York to Bay City. It's the lowest of all — \$1.37 less than by the next lowest-priced air service."



**GETS THERE FIRST** via U.S. Scheduled Airlines

**CALL AIR EXPRESS . . . division of RAILWAY EXPRESS AGENCY**

## Combustion Chambers Continued from Page 47

chamber arrangements evident on new or revised 1955 passenger car V-8 engines:

The 1955 Buick combustion chamber represents a continuation of the basic form used in 1954, except that piston dome height has been increased to raise compression ratio to 9 to 1. While this resulted in a very small in-

crease in the amount of quench area, it did not appreciably affect the characteristics of the chamber.

Present chamber form is modified considerably from the one introduced in 1953. It has been made more compact by moving both walls toward the center line of the cylinder, thereby consider-

ably reducing the ratio of surface area to volume, resulting also in an improvement in volumetric efficiency.

Quench area thickness has been reduced from a nominal value of 0.080 inch to 0.060 inch, which is said to increase its effectiveness. The spark plug, in its central location, provides for a short and relatively uniform path of flame travel to all parts of the chamber.

A distinctive feature of this chamber is the effect of the offset inlet valve and port upon the flow of the incoming charge. A definite swirl pattern is evident in the formation of the light deposits on the piston dome. It indicates that the valve and port arrangement imparts a circular movement of the charge around the axis of the cylinder. It is claimed that this swirl, in addition to the quench area, provides a highly turbulent condition contributing to a gain in mechanical octane numbers.

The cylinder head portion of the combustion chamber is fully machined, control of volume being achieved through a continuing check by the inspection department.

The 1955 Cadillac chamber arrangement may be briefly described as being a wedge-shape, highly turbulent type with 85 per cent piston coverage. The only change from the 1954 form is in the increasing in compression ratio of 9 to 1.

The chamber is completely machined, production machining being so held that individual cylinders will not vary from the norm by more than 0.05 ratio.

The Chevrolet chamber is of the high turbulence, wedge-shaped type designed for combustion control and combustion smoothness by controlling the rate of pressure rise. It exposes a high volume of the fuel mixture charge early in the combustion cycle, then moves the burning mixture into the quench area, these characteristics being effective in providing low octane requirements as well as smoothness.

Another advantage is that the compact chamber makes it feasible to use a flat top piston which  
(Continued on page 80)



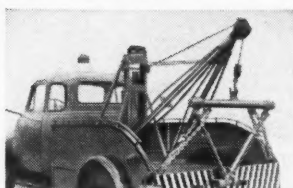
### Pull them in—to Your Shop— with a MANLEY Wrecker

• Wreckers are profitable two ways—for towing, and for pulling disabled vehicles into YOUR shop where you get the repair work. A MANLEY Wrecker can make money for you both ways.

Illustrated above is the MANLEY WC-8. This 8-ton wrecker has a large, oversize frame with double swinging booms. Two separate winches, with independent controls at both sides. Outriggers for heavy side pulls.

7 models available

The best-equipped garage gets the profitable business. See your MANLEY Jobber today.



• The new WC-5 Wrecker has a 10,000 lb. pulling capacity. It has a double non-swinging boom that is designed to handle normal garage wrecking jobs. Boom can be raised and lowered under power directly from the power take-off. Also shown is MANLEY 2209 Towing Hitch.

#### Write for Information

MANLEY DIVISION  
American Chain & Cable, York, Pa. MA  
Please send literature and prices on  
MANLEY Wrecking Cranes.

Name \_\_\_\_\_

Address \_\_\_\_\_

Town \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



Manley Division  
AMERICAN CHAIN & CABLE

York, Pa., Chicago, New York, Portland, Ore.,  
San Francisco, Bridgeport, Conn.

In Canada:

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R. S. McCune, McCune Motors, National City and La Jolla, California

## *"Royal Triton 10-30...top performance in our Imperial, Chrysler and Plymouth automobiles"*



"Since the introduction of Union Oil's Royal Triton 10-30 to the motoring public last year, it has been used in all our company cars, in all our demonstrators, as well as in my personal car.

"We find that using Royal Triton 10-30 keeps engines cleaner, reduces wear and permits free operation of hydraulic valves. The result has been top performance in our Imperial, Chrysler and Plymouth automobiles.

"To sum up, our experience with Union Oil products, such as Royal Triton, during the past seven years which we have

been using them has been highly satisfactory in every way."

As Mr. McCune has found out, it pays to put Royal Triton motor oil in the cars you sell and service. Your nearby Union Oil representative can give you prompt delivery of this fine oil in either the 5-20 or 10-30 grade.

**UNION OIL COMPANY**  
OF CALIFORNIA

**76**

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## Combustion Chambers Continued from Page 78

is more economical to produce and has a minimum of head mass. The spark plug is located 1.54 inches from the center line of the valves, slightly closer to the intake valve. The distance from the spark plug electrode gap to the extreme edge of the chamber is 2.84 inches.

Chevrolet deliberately selected an 8 to 1 compression ratio to

make it possible on the one hand for an owner to operate on regular gasoline grades where octane ratings are favorable; and at the same time permit other owners to enjoy the improved performance and economy stemming from premium fuels at their option.

Chevrolet recognizes that in the event of heavy combustion cham-

ber deposits, the octane quality of regular fuels will be inadequate and expects that owners will then find it desirable to switch to premium fuels.

The chamber is used as-cast without machining. Combustion chamber volume, including the machined recesses for intake and exhaust valves, is held closely in manufacturing.

The 1955 Chrysler design practice has branched in two directions, both aiming at the same objectives.

The original group of V-8's has a basic design that employs twin rocker shafts per head, separate rocker shafts for intake and exhaust, permitting laterally disposed valves, the entire arrangement being aimed at the use of a machined hemispherically shaped combustion chamber. The basic concept from the start was to use conservative compression ratios that would make possible knock-free performance with regular service station fuels.



According to Chrysler engineers, the hemispherical chamber design with its inherently low surface-to-volume ratio and favorable spark plug location, giving short flame travel, exhibits excellent detonation control. Moreover, it has been demonstrated that these engines can use as high a compression ratio as other types, on a detonation limited basis.

(Continued on page 82)

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# Confidence

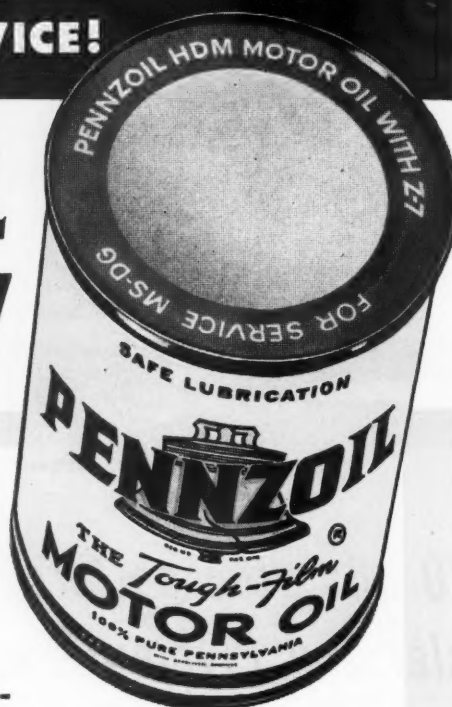
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Only motor oil with  
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Improves engine performance so noticeably your customers can feel the difference behind the wheel. Keeps them satisfied!

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more profitable service business!**

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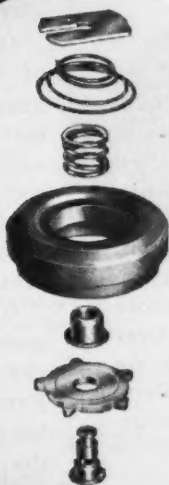
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**7-PART  
FOOT VALVE..**

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NEW...**



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**Y**OU can't SEE the exclusive Foot Valve in the new **SKY-RIDE** Shock Absorber . . . but it's there, "self-adjusting" the **SKY-RIDE** to compensate instantly for *all* driving conditions . . . from slight dents in the road to "shell-craters".

This revolutionary 7-part foot valve is a patented, self-contained 2-way operating valve that regulates the flow of oil *both ways* with a metering effect. It is solidly welded into the **SKY-RIDE** for dependable, long-life service.

And this is only *one* of the many features that are making Thompson Products' new Airplane-Type **SKY-RIDE** Shock Absorber one of the fastest growing items in today's automotive replacement market. Stock up *now* to meet the demand!



See your  
**Thompson  
Products Jobber**

THOMPSON SERVICE SALES  
2209 Ashland Road • Cleveland 3, Ohio

## Combustion Chambers Continued from Page 80

The difference in octane ratings of current regular and premium fuels is sufficient to permit about a full compression ratio increase without detonation on regular grades.

In addition to favorable detonation characteristics, the hemispherical chamber appears to have the least surface ignition effect

from heavy combustion deposits, according to Chrysler.

From the inception of the basic design, the objective was to retain a basic displacement and then make successive changes in various directions to produce increased ratings and performance characteristics.

For 1955, Chrysler has intro-

duced a modification of its basic design, exemplified in the so-called polysphere combustion chamber in the Plymouth Hy-Fire, Dodge Red Ram, and Windsor deLuxe Spitfire engines. This version, incorporating a single rocker arm shaft in each head, results in manufacturing simplicity and weight reduction, yet retains many of the characteristics of the hemispherical chamber.

It is very compact, having low surface-to-volume ratio, and still permits the use of laterally arranged valves on opposite sides of the combustion chamber. This valve arrangement required only a slight reorientation of the exhaust valve to permit valve actuation from a single rocker shaft. Using scalloped rocker covers, this design permits a more favorable location of spark plugs near the center of the combustion chamber, outside the engine for easy accessibility.

Performance characteristics of this simplified design show close similarity in detonation control, absence of surface ignition, small power losses from deposits, and a higher specific output for any given octane number fuel.

On pg. 45 is the familiar pattern of the hemispherical combustion chamber. Nearby is the arrangement of the polysphere chamber engines. On pg. 45 also are a direct comparison of the two types in plan view, the Plymouth engine being shown in the lower portion of the illustration.

On pg. 47 you'll see a typical arrangement of the combustion chamber for V-8 engine in the Ford family. It is the same as in 1954 except for the elimination of the so-called "kidney" section (shown by the dotted lines). The change to an "open" wedge-type chamber is said to result in improved exhaust valve cooling and reduced sensitivity to fuel octane rating. Thus it has been possible to increase compression ratio without increasing octane requirements.

As illustrated, the chamber is small and compact, with unusually large valves placed side by side, the spark plug being located for

*(Continued on page 86)*



**Build  
a Reputation  
for Quality!**

**use only  
FACTORY NEW  
GENUINE  
BENDIX DRIVES  
and  
PARTS!**

It's easy to build a reputation for quality if you use only genuine parts in your repair work. For example, when you service Bendix\* Drives be sure to use only *factory new* Bendix Drives and Parts. This means your customers will get the same dependable performance that is built into every original Bendix Drive—performance proven by over 100,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor.

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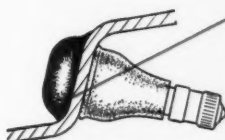
Now . . . you can simplify your tubeless tire mounting service, do a better installation job and get the best seal to the rim . . . with the new Schrader EZE-MOUNT Tire Valve. This new valve is designed for original equipment *and* designed for you. Use it in your installation work and you'll always be sure of the air tightness on your tubeless repair work . . . *at the valve!*



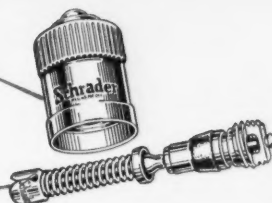
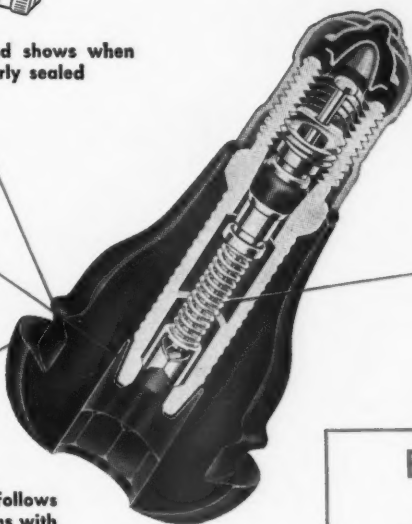
Indicating Band shows when valve is properly sealed



"Ball-and-Socket" action permits valve stem to flex without accidentally disturbing rim seal



Wide base with special lip follows contours of passenger car rims with round rim holes . . . and forms a positive airtight seal



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Be sure your tire servicing is done right . . . because that means satisfied customers! Use and sell the new EZE-MOUNT Valve and Schrader first quality Caps and Cores. Order from your supplier today.

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"I find that I save valuable time by doing business with my Chevrolet dealer. When I need parts, I don't have to run all over town looking for them. I call our Chevrolet dealer, who carries a complete line."

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**Independent Servicemen  
get these 4 big benefits**



**2**

## **Technical help in service problems**

Booklets like the Repair Manual help you solve tough problems quickly by showing best and quickest installation methods. On tricky service problems, see your Chevrolet dealer. He can help you solve them quickly.



**3**

## **Increased service efficiency**

The right parts do the job best. They are made to fit right . . . function better . . . last longer. It will pay you to do business with your Chevrolet dealer. In so many ways, he is actually your partner in service!



## **A complete line of Chevrolet Parts**

Your Chevrolet dealer is one, convenient source for all Chevrolet parts—not just a few, but all of the more than 22,000 parts serviced. He can assure prompt delivery, helps you give your customers better service!



**4**

## **Quality you can depend on**

Your Chevrolet dealer handles parts manufactured to high standards of quality, precision-built for dependable operation. Buy your Chevrolet parts from the man who specializes in them—your Chevrolet dealer.





## Combustion Chambers Continued from Page 82

most efficient combustion. Since the volume is small, less surface area is exposed to the coolant, thus contributing to improved thermal efficiency. Smoothly contoured intake passages and short, direct exhaust ports make for higher volumetric efficiency.

An important attribute of the wedge shape is the large squish

area which creates high turbulence, making for more uniform burning, more complete combustion at a faster rate, and improved scavenging.

These combustion chambers are used as-cast, without machining.

For 1955, Oldsmobile's chamber of the Rocket engine was altered by a revision in depth to effect an

increase of compression ratio to 8.5 to 1. In addition, more clearance was provided around exhaust valves to improve breathing and to increase turbulence.

Page 47 indicates the extent of the latter change by comparing the form for 1954 and 1955. A further comparison of the current and previous chamber arrangement is found on the page.

The lower photo same page compares the cross-section through the spark plug location.

In general, it may be noted this chamber is extremely compact, has relatively short flame travel, and exhibits good turbulence. It is said to provide for maximum utilization of current fuels from the standpoint of octane requirements, maximum power, fuel economy, and freedom from engine roughness. The chamber is used as-cast, without machining.

Pontiac's new combustion chamber for its overhead valve V-8, (note pg. 46) is wedge-shaped and includes provision of a thin quench area, 0.055 inch in depth, covering approximately 35 per cent of the piston head. This arrangement is said to promote turbulence, shorten effective flame travel. The cooling effect of adja-

*(Continued on page 88)*

**Distinctive Packaging for Products of Distinction**



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... the complete line of replacement parts...  
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Valves	Tie Rod Ends	Piston Pins
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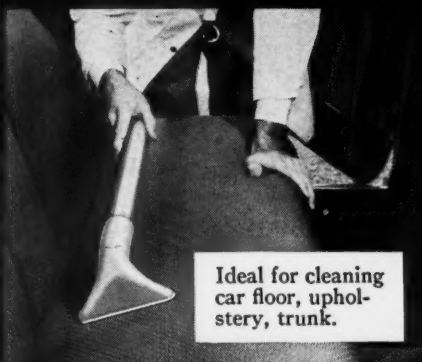
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1400 East 20th St., Indianapolis, Ind.

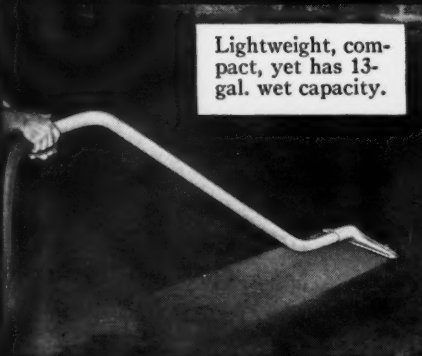
## Timken Receives Plaque from AIM

The Timken Roller Bearing Company has been awarded a "certificate of management excellence" from the American Institute of Management and a shareholders' annual meeting award from the United Shareholders of America, Inc.

The AIM award, in the form of a plaque was presented to the Timken Company after the AIM audit committee examined the company in ten areas. The areas are: economic function, corporate structure, health of earnings, fairness to stockholders, research and development, directorate analysis, fiscal policies, production efficiency, sales vigor and executive evaluation.



Ideal for cleaning car floor, upholstery, trunk.



Lightweight, compact, yet has 13-gal. wet capacity.



Hose, cord, accessories store neatly out of way.

## New Black & Decker "95" Vacuum Cleaner gives up to 20% more cleaning power! *Heavy-Duty Model Travels Anywhere . . . only \$235.00*

The new Black & Decker "95" Vacuum Cleaner, powered by a 1¼-hp motor, is designed for both wet and dry cleaning. Has up to 20% more cleaning power than any comparable unit! Completely mobile. Super-flexible, accordion-type hose actually extends to 15 feet to reach hardest-to-get-at spots! Push-cart handle has generous storage rack for accessories, can be removed with a flick of the finger.

Cleaner has a capacity of 1½ bushels of dirt or 13 gallons of liquid. Rugged steel tank construction will stand up under heaviest use. A must wherever cars are serviced or cleaned. See your distributor for a demonstration. THE BLACK & DECKER MANUFACTURING COMPANY, Department 3105, Towson 4, Maryland.



For nearest distributor, see "Tools-Electric"

LEADING DISTRIBUTORS EVERYWHERE SELL

 **Black & Decker®**  
PORTABLE ELECTRIC TOOLS

## Combustion Chambers Continued from Page 86

cent metal is claimed to prevent detonation.

Look on pg. 46 for form of the chamber in plan view. It will be noted that the spark plug is close to the intake valve for maximum efficiency, adjacent coring being so designed as to provide positive cooling of the plug.

This type of chamber was adopt-

ed because it presented the best combination of output and fuel economy out of the many forms evaluated for the new engine. Tests also indicate, according to Pontiac, that it offers maximum adaptability to future increase in compression ratio without combustion harshness.

It is of interest that the shape


of the chamber as seen on page 46 lends itself to complete machining, thus assuring positive control of compression ratio. As a result, all cylinders are of uniform size, thus further contributing to engine smoothness.

For 1955, Packard has introduced a family of engines having two basic types of chambers—the smaller displacement having a cast chamber of teardrop shape in plan view and used without machining; the larger engine having a geometrically pure form which is fully machined. Both chambers are of compact, wedge form as illustrated in the drawing on pg. 46.

The cast chamber offers a configuration particularly suitable for optimum combustion. It has a boss in the deep portion of the wedge, making it possible to use a 14 mm,  $\frac{3}{4}$  inch long reach spark plug. The design offers improved scouring of plug electrodes to minimize deposit formation; it also shortens flame travel and provides improved spark plug cooling.


The elliptical machined chamber which has the spark plug located near the intake valve provides improved scouring of plug electrodes, and has excellent cooling for the plug. This chamber induces high swirling turbulence with minimum loss of heat energy to the cooling system.

It's a special Fel-Pro formula that makes Felcoid so tough, you can bend it, flex it, fold it, without affecting its sealing power. Because it




**SHRINK RESISTANT!**

is a homogeneous material, it maintains its shape insuring easy installation. Because this amazing material can be folded to fit into SMALLER



**ALWAYS FRESH!**

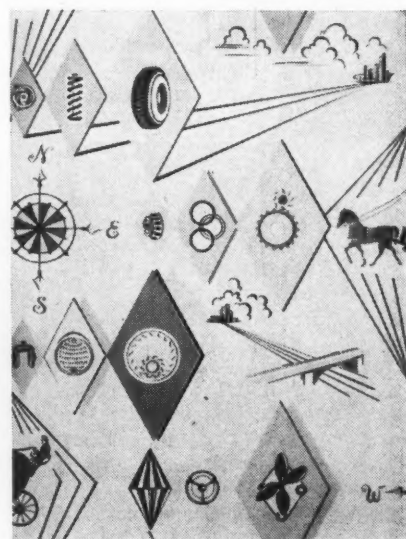
CARTONS, it means easier handling and stocking of entire Fel-Pro Gasket sets... head sets, oil pan sets, full sets and push rod cover sets.



**ALWAYS A PERFECT FIT!**

... it's a **FEL-PRO** **Felcoid** Oil Pan Gasket!

FELT PRODUCTS MFG. CO., 1521 Carroll Ave., Chicago 7, Ill.



WALLPAPER PATTERN above is known as "Autorama." Made by Warner Co. of Chicago, the pattern depicts drawings of the growth of the automotive business.





## 6 roads to extra profits . . .

*with the Universal 'Jeep' and Willys 4-wheel-drive utility vehicles*

Here are six advantages you'd enjoy as dealer for the 'Jeep' family of 4-wheel-drive vehicles:

1. **Freedom from competition:** Only Willys Dealers have the 'Jeep' family . . . no worries about nearby "wheeling and dealing" competition. No loss of markets during winter months.
2. **High resale value:** Average 2-year-old Universal 'Jeeps' command 86.5% of purchase price—assurance of customer satisfaction and your profit on "wash-out" sales.
3. **High percentage of clean deals:** Nearly half the sales are made without trade-ins—full profit is attainable on each sale.
4. **High service absorption:** Even with its famed ruggedness, the 'Jeep' family requires more frequent service than passenger cars because of its daily use in business . . . and most service jobs come back to the dealer instead of the independent garage.
5. **Lowest-priced 4-wheel-drive trucks:** As the lowest-priced 4-wheel-drive truck in America, the 'Jeep' Truck has the inside track in the growing trend toward 4-wheel-drive trucks in business, industry and agriculture.
6. **Plus profits from special equipment:** You'd sell more than 50 kinds of additional special equipment with profitable "extras" on original and follow-up sales.

**More than 450 new dealers** have signed up recently to sell the Universal 'Jeep' and Willys 4-wheel-drive utility vehicles . . . after getting the facts. To see what these facts can mean to you, contact Dealer Development Department, Willys Motors, Inc., Toledo, Ohio.

**The 'Jeep'** family of 4-wheel-drive vehicles . . . Willys Motors, Inc.

## A Prescription . . . . Continued from Page 59

right places. This will reduce glare, eliminate shadows, and provide illumination that is consistent with efficient seeing.

Glare is one of the most frequent and serious faults found in garage lighting systems.

Glare is essentially uncomfortable light which hinders seeing and produces eyestrain and

general fatigue of the worker. It can be reduced by proper shielding and positioning of the light sources with respect to the mechanic and his work.

Shadows are usually caused by car hoods, overhead equipment, and sometimes by individuals getting in their own light. By using enough light sources and by in-

stalling them correctly, you can minimize disturbing shadows. Usually portable drop cords are needed for some of the inaccessible areas in and around and under the cars being serviced.

Bright and dark contrasting areas are another source of eye discomfort. If a mechanic, concentrating on his job in front of him, is aware of a much brighter or darker surface in his field of vision, that strongly contrasting surface will cause him considerable eyestrain.

These brightness contrasts can be effectively reduced by using light colored paint on the surrounding walls and ceiling and by having a general lighting system which uses these light colored areas to reflect light into the work area.



## Exide ... meets competition profitably all across the board!

When you sell Exide Batteries, you can offer Exide quality in four major price ranges. And you're backed by Exide's unbeatable brand name... sound sales policies... aggressive merchandising... strong, national advertising... nationwide guarantee... and a 67-year reputation for business integrity.

**ULTRA START** Premium quality, high profit line. Exclusive Exide features assure finest battery performance under any conditions—high mileage driving, stop-and-go driving, in hot or cold weather. 8 group sizes.

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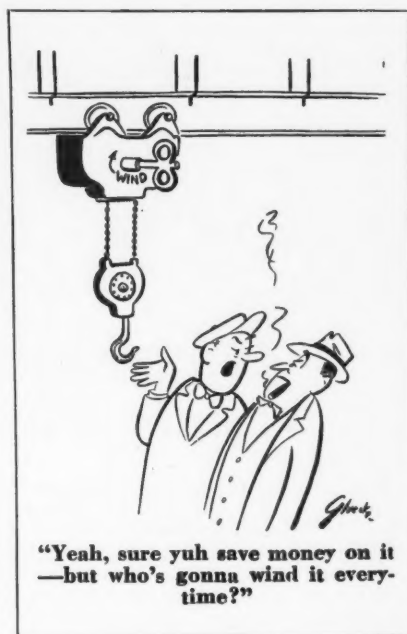
**SURE START** Built to rigid quality standards but priced to compete with original equipment-size batteries. Exide's reputation-maker for years. 9 group sizes.

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**It's easier to do business with Exide  
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"Exide, Ultra Start, Hycap, Startex" T.M. Reg. U.S. Pat. Off.

**Exide**  
AUTOMOTIVE DIVISION  
Philadelphia 2, Pa.



Since little service work is done in storage and parking areas, a general overhead lighting system which will provide 10 footcandles of illumination will normally be sufficient for these areas. In order to provide a uniform lighting level, however, it is preferable to provide the lighting from a larger number of lower wattage lamps rather than from fewer large units.

But convenient wall or pillar outlets for supplemental lighting  
(Continued on page 94)

# NEW WAY

## TO SAFEGUARD RIDING COMFORT



# SKY-RIDE

*Airplane Type*

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Rough roads . . . high speeds . . . sudden stops and faster starts . . . "softer" suspension design . . . all these factors today demand improved performance from shock absorbers.

Toledo Steel SKY-RIDE shock absorbers are the new way to safeguard riding comfort under today's driving conditions. Patented features of the SKY-RIDE offer longer shock absorber life, plus thousands of extra miles of smooth driving comfort.

Your customers will like the smoother ride that SKY-RIDE offers. You will like the profit features! For further details, see your Toledo Steel Jobber. Write, phone or wire Toledo Steel Products Co., 6402 Cedar Ave. Cleveland 3, Ohio.



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...extra  
strength  
welding

new  
...extra  
fluid  
reserve

new  
...chrome-  
burnished  
cylinder

new  
...chrome-  
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new  
...automatic  
ride  
control



ANCIENT SYMBOL OF PERFECTION  
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**"I've made *\$1500<sup>00</sup>* extra selling**

**Bronx Service Station Operator Proves Anybody Can Make**



*Mel Blauvelt says:*

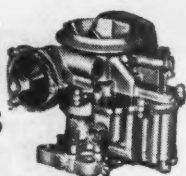
**"DEMONSTRATE—AND STRESS QUICK INSTALLATION!"**

Mel Blauvelt is owner and operator of A & A Service Stations, Bronx, N. Y. "About a year ago we decided there was a definite market for power brakes that could be installed on any car," he writes. "We gobbled up all the information on the Bendix unit we could get from our jobber. We then relayed it to our mechanics and instructed attendants and lube men to say to every customer: 'We can install power brakes on your car in one hour.' I had a demonstrator unit with the off-on switch put on my own car. We've installed over 50 units in cars, taxis and ambulances!"

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**FACTORY-  
NEW LINED  
BRAKE SHOES**



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## **STRAIGHT ANSWERS TO STRAIGHT QUESTIONS ABOUT THE NEW BENDIX PASSENGER CAR POWER BRAKE**

**How good a mechanic  
do I have to be?**

Any mechanic can make a Bendix Power Brake installation—no special skills or tools required.

**Is it a fast-selling item?**

It's the best-accepted, most-advertised accessory on cars today. People with older cars want them and are buying them by the thousands. An ideal market for service stations and garages.

**How much money do  
I make per brake?**

About \$30.00 profit per unit on the average! What else do you sell that will make you more money any faster!

**How much time  
to install?**

From 40 minutes to 2 hours. Mel Blauvelt stresses quick installation—one hour for any car or truck. It's a big selling point!

**How do I get**

*Started?*

Call your nearest jobber or the Bendix Distributor. There is a Bendix Power Brake Distributor to serve you wherever cars are serviced.

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STROMBERG\* CARBURETORS—Cars, Trucks, Industrial • BENDIX VACUUM POWER—Power Brakes—Passenger Cars, Trucks, Trailers • HYDRAULIC CONTROLS—Power Steering—Passenger Cars, Trucks, Trailers, Buses, Industrial, Agricultural • BENDIX BRAKES—Factory-New Lined Shoes, Lining Segments, Repair Parts • BENDIX\* METALCENE—Metal Parts Cleaner • BENDIX\* ECONOCLENE—Multi-Purpose Cleaner Concentrate.

\*REG. U.S. PAT. OFF.



## A Prescription . . . . Continued from Page 90

should be installed to facilitate casual—simple—occasional servicing inspections and minor repairs. Clean floors, painted a light color or finished in light cement are a great advantage in all garage areas, as they reflect light and make seeing easier under vehicles.

The lighting for lift racks or pits should be such that as much

as possible of the under body is lighted. Pit lighting can be provided by specially designed fluorescent units, on either side of the pit, positioned to cover the under body area with enough light to see most tasks directly.

Wall niche units are usually covered with protective glass to minimize lamp breakage and to

provide for easy cleaning. Pit walls and floors should be painted a light color in order to use the lighting most efficiently and to encourage better housekeeping.

Motor repair areas particularly, need a good lighting installation for quick and accurate seeing. The permanent overhead lighting installation should produce at least 50 footcandles of illumination on the working surfaces. In the cases where this is not practical, additional lighting from portable sources to provide adequate seeing at the point of work is needed.

Each subdivision of your shop should have additional supplemental lighting designed to the specific seeing tasks. This supplemental lighting can come from fixed or portable units. Extra illumination of 100 footcandles or more is easily obtained and is needed for many difficult seeing tasks. Any type of skilled shop work includes some of the most exacting seeing tasks found in industry and lighting that makes for easier seeing increases worker efficiency.

**"What does the Chaplain of Congress do?"**

**"He gets up on the platform takes a look at the Senators and Representatives, then prays for the country."**

Body repair areas use large pieces of metal, often with a shiny finish. For this type of work, large area, low brightness light sources such as fluorescent lamps produce the most satisfactory general illumination.

Painting, a distinct body shop operation requiring safety precautions with explosive proof electrical equipment, also requires high quality lighting.

One popular technique is the use of a paint booth with sealed glass panels. These panels serve to restrict the hazard to the booth itself and in most cases standard lighting equipment can be used outside the panels.

And one last word of advice: It is always advisable to check with your local electrical inspector on the design of lighting systems for hazardous areas.

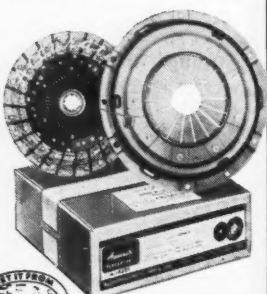
**DID YOU KNOW  
ACCURATE CLUTCH SETS  
ARE MADE TO BE  
A PERFECT PAIR?**



**OF COURSE... AND  
THEY'RE PACKAGED READY  
TO INSTALL WITH  
WHATEVER PARTS ARE  
NEEDED FOR A  
PERFECT JOB!**



**BALANCED • MATCHED • TESTED • MATED • SEALED**



### *Accurate* **CLUTCH SETS**

Accurate offers you the only line of complete clutch sets. Every pressure assembly is checked on a floating table for perfect balance. Next, it is matched, tested and mated with a new Powerflex® Clutch Plate for smooth, full release. Last, the plate and assembly are wired together... sealed as a complete Accurate Clutch Set. Bushings, gaskets, bearings, etc., needed to do a thorough job are included where applicable. Ask your Accurate Jobber about the complete Accurate line!

**ACCURATE PARTS MANUFACTURING CO.**

1600 S. Ashland Ave., Chicago 8, Illinois



# Fram fantoms strike again!



**\$5.00 CASH**  
when you catch the  
FRAM Phantom!

Ask every motorist  
"How's Your Oil Filter?"

## It's FRAM more than 2 to 1!

Here's where FRAM really pays off! Survey after survey shows motorists prefer FRAM more than 2 to 1 over any other brand . . . and in many of these same surveys, the preference for FRAM is greater than the preference for the next two most popular brands combined!

Once again, the fabulous FRAM Phantom Drivers are coming your way with free cash! You'll win \$5.00 if you suggest an oil, air, fuel or water filter replacement or filter installation to the FRAM Phantom Driver.

You don't have to be a FRAM Dealer to win, but if you stock the complete FRAM line you'll cash in on profits as well as prizes! Every time you check oil, air, fuel or water, mention a new cartridge or filter installation. If it's a FRAM Phantom Car you win \$5.00—if it's not a Phantom, chances are you've started a profitable sale anyway! You're certain of winning either way.

You can't tell a FRAM Phantom Driver from any other motorist . . . so be sure to suggest a cartridge change to every customer—you can't lose! Get more details on the sensational FRAM Phantom Drivers from your distributor—and stock plenty of FRAM!

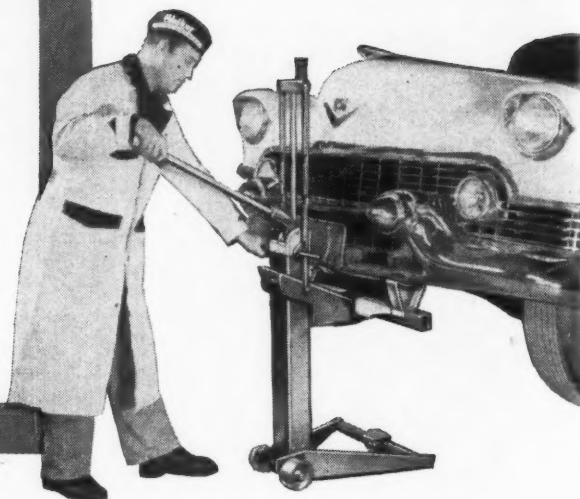


FRAM  
CORPORATION  
Providence 16, R.I.  
Fram Canada Ltd.  
Stratford, Ont.



# New WALKER "Handy Boy"

No. 99



**EASIER...**  
TO POSITION

**EASIER...**  
TO RAISE

**EASIER...**  
TO LOWER

...AND

**FAST!**

## THE EASIEST-TO-USE HYDRAULIC BUMPER LIFT you ever owned!

Here is a truly great hydraulic one-end bumper lift—Walker engineered to meet in *detail* the new lifting requirements of modern automobiles.

It's the easiest-to-use jack you can own. You'll like its convenient "Top-Column" controls and its unusual "Tri-cycle" maneuverability. You'll like its new Walker designed hydraulic power unit and its fast, low effort operation. You'll like its safety features and its permanently attached "swing-away" handle.

On the driveway or on the service floor . . . for tire changing . . . wheel rotation . . . chains . . . brake or shock absorber service . . . front end assemblies . . . light body work . . . or wherever it is necessary to release springs or have both wheels free and accessible—choose the new Walker No. 99.

"Handy Boy" provides the convenient, fast, safe, unhampered hydraulic lifting power you have been hoping for.

**WALKER MANUFACTURING CO. OF WISCONSIN**  
RACINE, WISCONSIN

Jacks • Exhaust Silencers • Oil Filters

Only  
**79<sup>85</sup>**  
U. S. DEALER NET



# WALKER

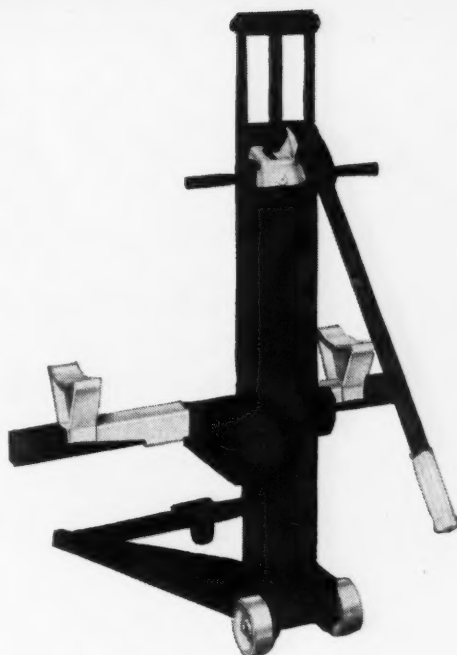
## NO OTHER HYDRAULIC BUMPER LIFT HAS ALL THESE OUTSTANDING FEATURES

**NEW SPECIALLY DESIGNED WALKER POWER UNIT . . .** Not an adaptation but an entirely new Walker precision engineered hydraulic power unit designed specially for the lifting job to be done. Fully enclosed and protected. Easily serviced.

**RUGGED "STEEL COLUMN" STRENGTH . . .** The load is safely supported on an unusually strong steel column with a welded steel triangular base to provide stability and safety.

**"COUNTER-ACTING" ROLLER ACTION . . .** The load moves up and down the steel column on broad "Counter-Acting" rollers operating on the front and back of the column. Rollers are mounted on hardened pins and "guide-flanged" to the corners of the column to assure low effort and long-lived, smooth operation.

**TWIN "SYNCRO-LOCK" SAFETY . . .** Twin safety dogs automatically engage in both connecting links at three positions to protect the load and the operator against accidental lowering.

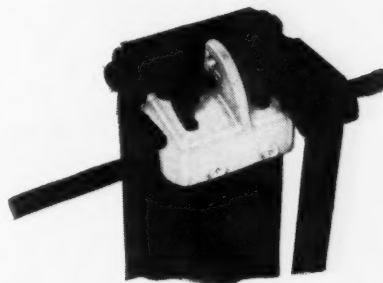


**"ALL-CAR" ADJUSTABLE LIFTING SADDLES . . .** Welded pressed steel saddles are adjustable from 23 $\frac{3}{8}$ " to 43 $\frac{3}{4}$ " to provide firm lifting points for any design of bumper. Clears all guards, hitches and tail pipes. 9 $\frac{1}{4}$ " clearance from front of column to center of saddle prevents damage to bumpers.

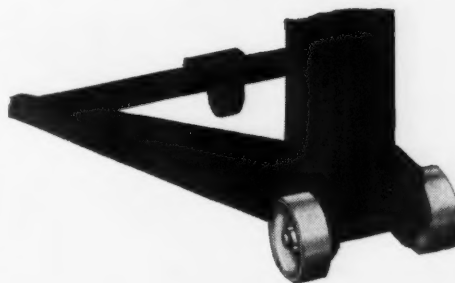


**"FINGER TIP" CONTROL . . .** Single control conveniently located on top of column disengages safety mechanism and releases hydraulic pressure for lowering.

**PERMANENTLY ATTACHED "SWING-AWAY" HANDLE . . .** The "Handy Boy's" handle is always ready to use—but never in the way. When not in use it swings down—out of the operating zone and may be locked in its "swing-away" position. Fitted with a comfortable plastic grip—the handle cannot get lost or laid aside.



**"V-BAR" SUPPORT PLATFORM WITH "TRI-CYCLE" MANEUVERABILITY . . .** The unique V-Bar base design provides an unusual combination of stability and maneuverability. Three wheels carry the "Handy Boy." The forward wheel is a swivel type caster spring loaded so the jack rolls freely in any direction. The two rear wheels are malleable iron. Under load the forward wheel deflects to allow the full "V-BAR" base to contact the ground or pavement. The forward cross member prevents the "toe" of the base from "digging in" when used on dirt, gravel or soft pavements.



# LEADS IN JACKS



# Check\_



## before you buy a spray booth and you'll see why so many body shops prefer Binks equipment

A spray booth is more than four walls of sheet metal. Before you buy a booth, check to be sure that it is exactly right for your shop...and budget.

LOOK FOR THESE IMPORTANT FEATURES:	BINKS BOOTHS
Is it available in the size and model best for your shop?	✓ yes
Standard models with or without doors	✓ yes
Drive through models with windows for spectators	✓ yes
Truck spray booths	✓ yes
Exhaust systems for built-in spray booths	✓ yes
Is the air flow uniform throughout the entire booth?	✓ yes
Is it easy to clean?	✓ yes
Does it meet local fire and health requirements?	✓ yes
Does it provide uniform shadowless lighting?	✓ yes
Is it easy to assemble?	✓ yes
Is it big enough to let the operator walk around the car?	✓ yes
Is it complete in every detail?	✓ yes
Is it mass produced to keep costs down low?	✓ yes
Is the maker experienced in the manufacture of spray painting equipment?	✓ yes
Is nationwide service available?	✓ yes
Is it built of heavy gauge steel for rigidity and long life?	✓ yes
Has it been thoroughly tested under actual shop conditions?	✓ yes

**ASK YOUR LOCAL JOBBER** about Binks spray painting booths. He will be glad to show you the many models, and to help you pick the right one for your shop. Or, if you prefer, write direct to the address below for full information.



GUNS



COMPRESSORS



FREE INSTRUCTION

**BINKS MANUFACTURING COMPANY**  
3124-34 West Carroll Ave., Chicago 12, Ill.

REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

## Busy Mechanics . . . .

Continued from Page 60

dall customers were offered a \$15.10 "package" for \$9.95. Involved was a front-end alignment, steering adjusted, front wheels adjusted, front wheels repacked, and rotation of tires.

The special offer netted about \$5 gross profit, reports Graves.

"Our men can turn out a special like this within two hours, or less," Graves adds. "And this promotion kept our three front-end mechanics busy during the entire month."

At this shop, mechanics work on a 45 per cent of customer labor. Flat rate is computed on a \$3.50 hourly basis.

As was anticipated, this promotion appealed to a certain category. Motorists driving cars bought in 1952 and 1953.

"Getting them interested early in the year," Graves notes, "softens them up for more work a little later on . . . this gets a percentage of customers who haven't been in for quite a time, and offers the opportunity to get reacquainted."

"With this much work out of the way, when it comes time to get the car ready for summer driving, they won't have to put off some of the work because of the expense involved all at one time."

It's quite simple to figure up that the mechanics received some \$4.75 for the labor involved. Which still gives them a break on their take on two hours' time, figured on a basis of \$3.50 per hour.

Due to the nature of this "Cherry Pie Special" . . . and the vintage of the cars . . . there was only 20 per cent add-on business. While the front-end men were working on the customers' cars they noted what other work needed immediate attention. And, they called one of the service salesman's attention to it. And . . . the service salesman got ahold of the customer, if he was available, and showed him what was needed to be done.

"We don't approve of our mechanics trying to sell the customer extra work," says Graves. "From the customer's standpoint, it looks

(Continued on page 102)

*More*

than a full measure of performance

...thanks to **BORG-WARNER** Engineering

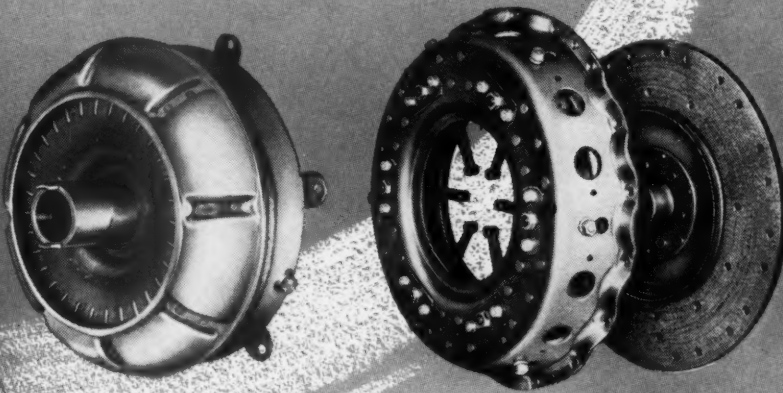
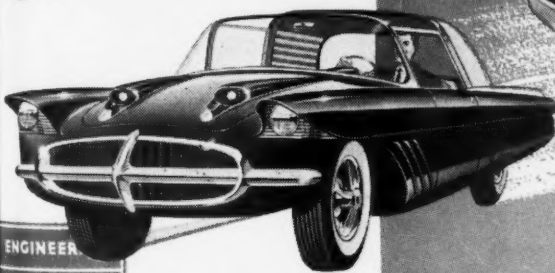
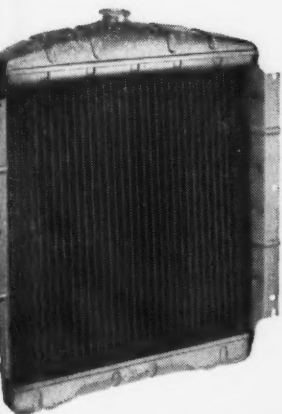
Brimming with power, today's high-horse engines impose tremendous demands on other automotive components.

Torque converters and clutches must be engineered more efficiently to withstand rapid acceleration, sustained high speeds and punishing stops. Radiators must dissipate more heat faster, yet stay slim and sleek as the cars they cool.

Knowing this, engineers at Borg-Warner's Long Manufacturing Division insist on exceeding their own consistently high standards. Performance has to be better than good ... a philosophy in force over 50 years.

That's why Long components ... engineered for *more* than a full measure of performance ... are in use on millions of cars, trucks, tractors, buses, boats and stationary engines. They're really rugged and dependable ... typical of the 185 performance-proved Borg-Warner products that serve the American public every day.

**LONG**



*B-W* engineering makes it work  
*B-W* production makes it available

**BORG-WARNER**

THESE UNITS FORM BORG-WARNER, Executive Offices, Chicago: ATKINS SAW • BORG & BECK • BORG-WARNER INTERNATIONAL • BORG-WARNER, LTD. • BORG-WARNER SERVICE PARTS • CALUMET STEEL • DETROIT GEAR • FRANKLIN STEEL • HYDRALINE PRODUCTS • INGERSOLL CONDITIONED AIR • INGERSOLL KALAMAZOO • INGERSOLL PRODUCTS • INGERSOLL STEEL • LONG MANUFACTURING • LONG MANUFACTURING CO., LTD. • MARBON CHEMICAL • MARVEL-SCHUEBLER PRODUCTS • MECHANICS UNIVERSAL JOINT • MORSE CHAIN • MORSE CHAIN OF CANADA, LTD. • NORGE • PESCO PRODUCTS • REFLECTAL CORP. • ROCKFORD CLUTCH • SPRING DIVISION • WARNER AUTOMOTIVE PARTS • WARNER GEAR • WARNER GEAR CO., LTD. • WAUSAU • WESTON HYDRAULICS, LTD. • WOOSTER DIVISION



# *"From Small Repair Shop to*

## **BELMONT MOTOR CLINIC**

**A. SORENSON  
& SONS**

**COMPLETE AUTO REPAIR  
CARBURETOR - IGNITION**

**ORIGINAL  
AUTO-LITE  
SERVICE PARTS**



Every service job passing through the shop has the personal attention of at least one of the Sorenson partners. Here Henry Sorenson (left) discusses a mechanical problem with Del Smith, mechanic.



Cheerful and efficient service is rendered at the cashier's cage by Rosemary White, cashier. Courtesy is a "must" with everyone in Belmont Motor Clinic.



# to \$100,000 Business...

**I've Built Solidly, Steadily with  
Original Service Parts**

SAYS: *Axel Sorenson*

Founder and senior partner of  
Belmont Motor Clinic, Long Beach, California

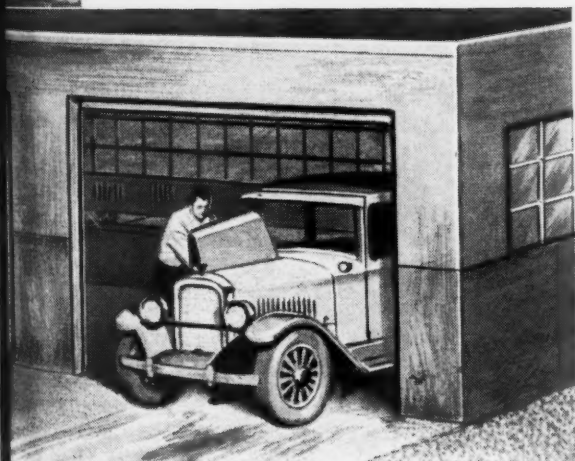


Axel Sorenson came to this country from Denmark in 1912. After working at various jobs for many years, he started his own small auto repair business in 1935. Today, he and his two sons, Edward and Henry, own a business that employs two mechanics, a tune-up man, an apprentice helper, a cashier and a clean-up man—and they gross around \$100,000 per year!

"Sure, it's taken a lot of hard work," Axel says, "but what worthwhile success is ever achieved without it? We've come a long way, and we feel we can go a lot further yet. After all, I started this business myself—now I have my two boys to carry the big part of the load.

"One of the main reasons for our success is, I am sure, our policy of using nothing but genuine original service parts—no 'off brands.' We've used Auto-Lite parts for years—you can't beat them."

Quality workmanship, backed up with the quality of original service parts, has been the foundation of many an enduring success in the automotive service business. Investigate the opportunities still open to you with Auto-Lite Original Service Parts.



Axel Sorenson's big, prosperous Belmont Motor Clinic started out in this small backyard garage. His present location is bursting at the seams handling \$100,000 yearly gross, and plans are under way for a new building that will practically double present work space.

THE  
ELECTRIC AUTO-LITE  
COMPANY

Parts & Service Division

TOLEDO 1,

OHIO



## Busy Mechanics . . . . Continued from Page 98

like a high pressure set-up. And as the public in general know specials are often used to get prospects in for a good going over before they get away, we shy away from this procedure."

To get this Cherry Pie Promotion under way, Kuykendall's ran a 3 column, 4 inch advertisement in the daily paper, every day dur-

ing the duration. Also radio spots were used . . . and a direct mail piece was sent to 4000 names on the active direct mail list.

The direct mail piece was run in two colors. The circling; the written-in notes; the letterhead, including the picture at the bottom; and Graves' signature was printed first in blue ink. Copy was run

later in black ink on the letter.

On all promotions, Graves goes over the deal with the mechanics involved.

"Thus customers don't come in knowing more about our own promotions than our own personnel. We want our personnel to give the customers the idea our promotions are well planned and well thought out in advance. And that

## Get Aboard These NIEHOFF PROFIT MAKERS



... says Danny Dollar

Sail through the year making more money installing Niehoff Ignition Parts. They're precision engineered to meet the exacting demands of your work. Complete line to fit all makes and models of cars, trucks, busses and tractors. Streamlined, instant reference catalog answers service questions at a glance. Ask your jobber.

### C. E. NIEHOFF & CO.

4925 W. LAWRENCE AVENUE • CHICAGO, ILLINOIS

WAREHOUSES: NEW YORK 19, N. Y., 250 W. 54th Street  
PHILADELPHIA, PA., 1631 Fairmont Ave. • BOSTON 34, MASS., 254 Brighton Ave.  
BRANCHES: LOS ANGELES 15, CALIF., 1330 W. Olympic Blvd.




we are all prepared to back up these promotions. If a promotion startles a mechanic who will do the work, the customers get the wrong impression. And they'll fail to respond to the subsequent ones."

Kuykendall's advertising manager, J. F. Schneider, prepared the newspaper copy, the radio copy, the direct-mail piece with the full cooperation of Graves.

In setting up these specials, Graves is careful not to set up a deal which he can't take care of immediately. If he had to schedule jobs ahead because he couldn't take care of the work, the customers would get a bad taste in their mouth . . . and the promotions would quickly lose their effectiveness.

With two pits, fully equipped, and three mechanics, he can take care of the 40 per cent plus business in stride.

Chilton's MOTOR AGE, MAY, 1955



**“Their interest in  
the dealer is  
tremendous”**

says **MR. CARL MATISSE**, Sales Manager  
of Atwater and Fish, well-known Hollywood,  
Calif., DeSoto-Plymouth dealer.

**“I** CAN'T think of any shortcomings in **COMMERCIAL CREDIT** service. Usually, we have been able to get credit approval over the phone while a prospect is being sold. Being able to control the financing and complete arrangements including automatic insurance coverage while the customer is in the showroom has helped us make a lot of immediate sales that might otherwise have been lost. Frequent meetings we have with **COMMERCIAL CREDIT**'s local people have been helpful to our sales group.”

**COMMERCIAL CREDIT DEALERS ARE *Successful* DEALERS**

A letter or call to your nearest **COMMERCIAL CREDIT** office will get you speedy and expert help with your financing problems. Why not call today?



**COMMERCIAL  
CREDIT  
CORPORATION**

A service offered through subsidiaries of  
Commercial Credit Company, Baltimore ...  
Capital and Surplus over \$175,000,000  
... offices in principal cities of the United  
States and Canada.



## Washing Service . . . Continued from Page 61

ideal. It's a scant three blocks from State and Broad Sts., heart of Trenton's business and downtown shopping center.

The second car wash machine routs road dust and grime from cars in for customer service at Reese's main showroom and service buildings at 620 East State St. Within backfire distance also

of State and Broad, these buildings have the added advantage of being close by the Penna. Railroad's passenger station where early morning commuters board express trains to Philadelphia or New York.

These commuters prove an excellent source of business to Reese.

"The customer leaves his car for lubrication and service and invariably asks for a wash job. If we didn't afford a top-notch washing service, he'd soon get into the habit of going elsewhere.

"After all, you may lube your car once a month but you want it washed once a week."

Incidentally, Reese's parts and service business amounts to a sizeable \$40,000 a month volume with service absorption running between 60 and 70 per cent.

Besides the excellent car wash service, Reese backs up his program to keep customers coming in for service regularly by offering a special coupon book worth \$11 in lubrications and wheel adjustments for only \$5.

Advertising is a mainstay for Reese whether it be for service or for selling new cars. Service-wise, he often includes the car wash in a "package." For example, an envelope or postcard mailing may offer customers a lubrication, a car wash, and a motor tune-up for about half the usual cost.

In accommodating the commuter trade, Reese by no means neglects those who work in Trenton itself and want to leave cars for service. Reese affords a quick, courteous ride for the customer to his place of business.

"While there's good public transportation near us," Reese notes, "the customer appreciates the extra personal touch and quick delivery by car."

How does each of Reese's car washing machines operate?

Both are automatic car washers. Each machine consists of a spray elevator-type in a rectangular frame. The frame can be lowered from the ceiling and then raised up again by means of a lift mechanism and a control cabinet.

The cabinet contains a pump for water pressure. A glass cylinder rests on top of the cabinet and holds the shampoo in readiness for eventual metered distribution through the spray elevator.

First step in the car washing procedure is for the operator to push a button on the control cabi-

(Continued on page 106)



Protect . . . and profit!

Install Corbin

Self-Tightening Hose Clamps

Give your customers the added protection of safe, dependable hose connections with Corbin Self-Tightening Hose Clamps—the original permanent tension clamps that provide tight, positive seals in all kinds of weather.

You'll find that Corbin Self-Tightening Hose Clamps can be installed quickly and easily . . . tighten automatically . . . eliminate the need for nuts, bolts or screws. Made of high quality heat treated spring steel, they resist rust and corrosion . . . never lose their spring or tension . . . grip evenly and securely, even on irregular castings, tube or hose. Try them and see. Remember—with Corbin you're "covered", at no extra cost!

For prompt service, order a supply of Corbin Self-Tightening Hose Clamps through your jobber today. Available in all sizes from 3/8" to 2 3/4" O.D. Corbin Hose Clamp Div., The American Hardware Corporation, New Britain, Connecticut.

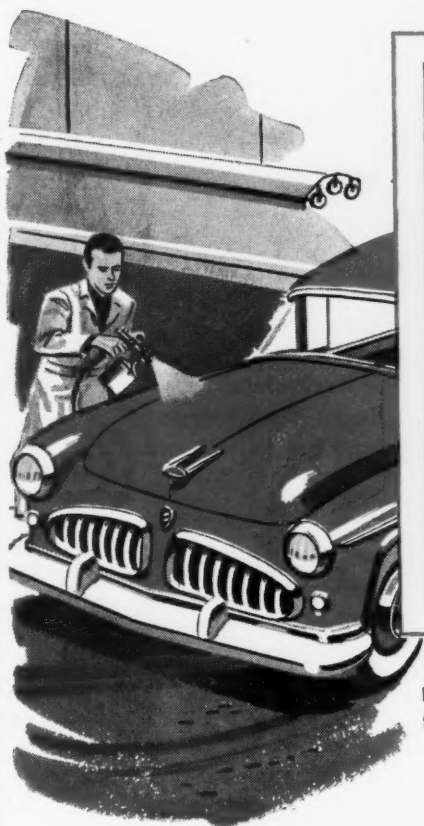


The Original  
**Self-Tightening HOSE CLAMPS**



# Reflector Test Proves You Get Highest Lustre...with **Ditzler's DTL 113**

**HIGH-GLOSS  
LACQUER  
THINNER**



● The two unpolished panels in this reflectometer test were painted with the same gray lacquer. The lacquer for the panel on the right was thinned with ordinary good thinner. The lacquer for the panel on the left was thinned with DTL-113. Note the excellent flowout and brilliant lustre of the left panel.

**It's the Fastest High-Lustre Thinner  
on the market—Saves Time and Labor**

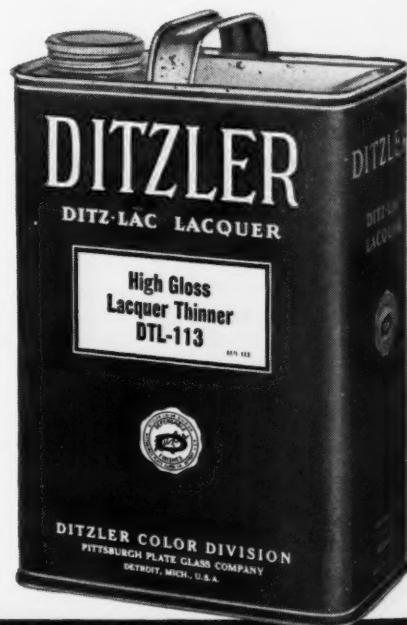
**WHEN YOU USE DTL-113** you get the high lustre of an enamel job with the drying time of lacquer.

**WHEN YOU USE DTL-113** you get much quicker drying than with special thinners designed *only* for high lustre. DTL-113 jobs can be dried and also polished, if necessary, in one half the time required for

special high-solvent, low-reduction thinners. Under normal drying conditions you can deliver a fully painted car in one hour after spraying. Lacquers thinned with DTL-113 are excellent, too, for quick touch-up materials on baked-enamel jobs.

**WHEN YOU USE DTL-113** you'll do faster and better work at lower cost.

DITZLER COLOR DIVISION • PITTSBURGH PLATE GLASS COMPANY, DETROIT 4, MICHIGAN



## DITZLER

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

## Washing Service . . . Continued from Page 104

net. This causes the spray elevator to descend, flooding the car with water. Second step is to blanket the car with shampoo (also by push button operation) while the third and final step is simply to rinse.

Reese says his car washing machines cut wash time in half. He particularly likes the overhead

suspension of the spray elevator frame. This, he observes, increases available floor space for service and storage.

Generally, though, his two car washing machines are kept busy throughout the day. Besides his steady wash customers, good weather and week-ends always mean a sizeable increase in the

demand for a car wash. In his New Car Preparation building alone, up to 150 cars a month are handled. Reese insists that every new car be delivered to the customer washed scrupulously clean, porcelainized, and undercoated.

Affable, well-known in the Trenton community for his promotion and advertising programs, Reese has built up his new car volume from 250 new car sales annually to around 1400 new car sales per year. And this in two and one-half years' time!

Service manager for Reese is Roy Wilson, a veteran of 30 years in the automotive service industry. Wilson is quick to point out the growth of the dealership under Frank Reese's leadership.

"Not only did the service area double its floor space but the number of employees soared from 20 to over 50 persons. Of these, 35 people are engaged now in service work alone."

Reese advertisements capitalize on the fact that in the eastern region of the U. S. and in Reese's price class, he is selling more cars on a percentage basis than others. Hence he calls his place "No. 1 Buicktown."

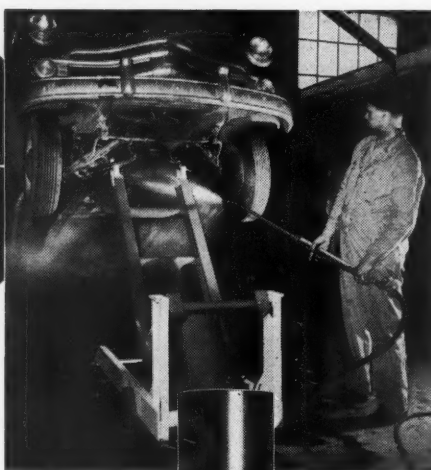
Reluctant to take praise for his successful sales and service program, Reese, however, readily admits his formula: "Hard work, good equipment, good organization, and sound merchandising . . . and then, more hard work!"

### it pays for itself while it earns for You!



A two-in-one, money-making service tool that REVERSE FLUSHES COMPLETE COOLING SYSTEMS: (radiator, motor block and heater) cleans car motors . . . rids radiators and front-end grilles of bugs and leaves . . . cuts grease, mud and road dirt from springs, frame and fenders . . . prepares cars for undercoating . . . cleans white sidewalls . . . and does scores of other services motorists need and want. While JENNY earns money for you it saves you money by keeping your building, driveways, floors, equipment, lifts and tools clean-as-a-pin at one-tenth the time and expense of hand cleaning.

For full particulars on how to put a Series 600 Hypressure JENNY Combination to work earning and saving for you . . .



Series 600  
Hypressure Jenny  
Combination

#### MAIL THE COUPON TODAY. No obligation.

Without obligation, send me FREE CATALOG and complete information on Series "600" Hypressure Jenny Steam Cleaners

NAME \_\_\_\_\_

TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_



**HYPRESSURE JENNY DIVISION**

**HOMESTEAD VALVE MANUFACTURING COMPANY**

*Serving Since 1892*

P. O. Box 95

Coraopolis, Pa.



BROWN

"Happiness isn't everything! It won't buy money!"

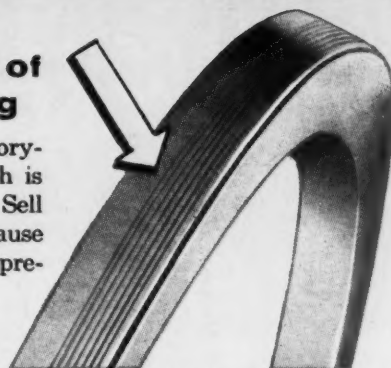


*Avoid  
come-backs  
use pre-seated Krome-Oil*

# AMERICAN HAMMERED Pre-seated Krome-Oil PISTON RING SETS

## Pre-seated narrow land contact surface of Krome-Oil top groove compression ring

Pre-seating means early break-in, no customer complaints. It is a factory-applied lapping process for the top groove compression ring which is equivalent to many hundreds of miles of *actual* engine operation. Sell and install chrome, with its long wearing qualities, confidently because Krome-Oil rings are pre-seated. They break-in instantly, deliver premium performance all the way.

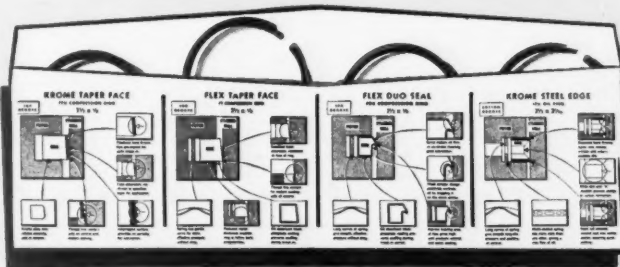


## Look for chrome here... to install a full chrome ring set

When you install chrome, be sure you're selling a full chrome ring set. Check for chrome on the top groove compression ring, on the side rails of the oil ring. Install chrome confidently because Krome-Oil is pre-seated. Krome-Oil seats instantly, doesn't scuff, and pays off in longer engine life.

## All-in-one ring envelope

All-in-one ring envelope contains all the rings for one piston. They're packaged in this envelope in the order of installation. This prevents mix-ups, saves yours or mechanic's time. A real help and time-saver in the shop.



Install Krome-Oil  
*the chrome ring set  
with all the answers*

## American Hammered

AUTOMOTIVE REPLACEMENT DIVISION

2001 Sanford Street • Muskegon, Michigan

Manufacturers of American Hammered Automotive Replacement Piston Rings.  
A Division of Sealed Power Corporation

Remember profit-packed American Hammered Power-Plus Service—  
Koetherizing • GI-60 Groove Insert • Dry Film Lubricant

models.

All of GMC's 6-cylinder gasoline engines have been increased in power. The horsepower of the 248 engine has been raised from 125 to 130, the 270 engine from 137 to 140, the 302 engine from 145 to 155, the 360 engine from 155 to 170, the 426 engine from 177 to 190, and the 503 engine

from 200 to 225.

The different V-8s have been developed to meet every hauling need. The 288 cubic inch engine for light and medium-duty trucks develops 155 horsepower and the 324 engine for medium and heavy-duty vehicles achieves 175 horsepower.

Due to demand spurred last

year by many large fleet orders for GMCs with automatic transmissions, the number of models equipped with the famed Hydra-Matic transmission has been boosted from 13 in 1954 to 65 in the 1955 line.

This wide Hydra-Matic coverage is shown by the fact that three of the nine new school bus chassis manufactured by GMC now have automatic drive.

The new "Speedline Styling" of all GMC conventional and dual-purpose trucks is considered by GMC as a new concept in truck design, combining the graceful lines of passenger-car outline with functional ruggedness.

Large wrap-around windshields along with a lower cowl and hood give the driver "picture window" visibility, a "Jet-stream Airscoop" on the hood provides a greater entrance area for cooling air to the radiator, and a wider and lower cab with greater interior space carries out the low silhouette theme.

Other stylings include hidden running boards, a streamlined grille, header bar and bumper assembly, a two-cluster instrument panel positioned directly in front of the driver, cadet peaks over headlights and windshields, rich color schemes, and a dramatic new ventilating system.

Thirteen exterior colors are available and optional equipment consists of such drivers' aides as electric windshield wipers, left-hand door locks, wrap-around rear windows and E-Z eye tinted glass.

Another engineering improvement is the development of a "hold" position in the 8-speed Hydra-Matic transmission for medium and heavy-duty trucks. Previously this position, for using the engine as a brake, was available only in heavy-duty trucks equipped with Twin Hydra-Matic transmissions.

The length of conventional cabs of GMC trucks has been revised to permit greater operating efficiency and bigger payloads. One of these revisions comes in the medium-duty 450 through 550 series in which bumper-to-back cab dimen-

(Continued on page 110)

## Avoid Costly Comebacks!

### Ammco Safe-Arc Brake Shoe Grinder

gives 100% lining to drum contact



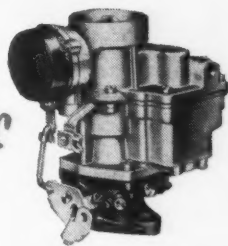
- Grinds all shoes for drums 8" through 17" diameter.
- Fast—Grinds set of 8 shoes in less than 4 minutes.
- Eliminates free brake adjustments and comebacks.
- Simple to operate... Built in vacuum system prevents dangerous flying dust.

**AMMCO TOOLS, INC.**  
2102 Commonwealth Avenue, North Chicago, Illinois

Because millions of cars



vitally need Carter



re-carburetion

you keep your shop buzzing



...hike



your profits

by being the man



to see for

# CARTER



## CARBURETERS

There's a giant market for Carter re-carburetion among the more than 37,000,000 cars in use today that are over three years old.

Carter national advertising tells these car owners — and millions of others — "MAKE SURE OF YOUR POWER CENTER!"

Think of the profit possibilities in your area! Get your share of the business by being the man to see for installation of new factory-tested Carter Carbureters ... for dependable carburetor service.

Get full details from your Carter supplier ... today!



**CARTER CARBURETOR CORPORATION • Saint Louis 7, Missouri**

Division of American Car and Foundry Company



## GMC Trucks . . . . . Continued from Page 108

sions have been reduced from 114 inches to 102 inches.

These new dimensions give better front-axle loading and permit the use of longer trailers while still remaining within legal trailer-length limitations.

The new C.O.E. Diesel series, the DF860-67 and the DFW820-67, will feature a new 6-71 engine.

This Diesel engine, with power in the 175-185 horsepower area, is light in weight due to the use of many aluminum parts. Although lighter, it has been engineered for even longer life and has such new features as a two-plate, 14-inch clutch.

Three other GMC engines have this rugged clutch. Company en-

gineers are convinced the clutch will win wide acclaim in trucking circles for its strong construction and for the savings resulting from reduced clutch replacement expenses.

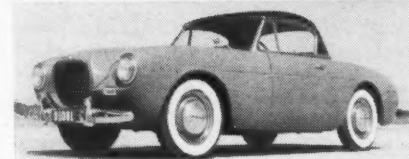
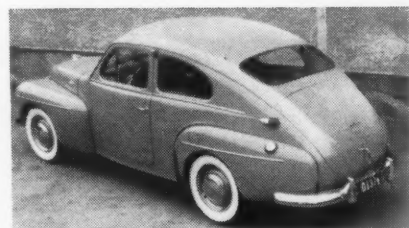
## Willys 1st Quarter Sales Reflect Rise

Domestic factory sales of Willys utility vehicles in the first three months of 1955 were 125 per cent greater than in the corresponding period of 1954, Hickman Price, Jr., vice president in charge of sales of Willys Motors, Inc., has announced.

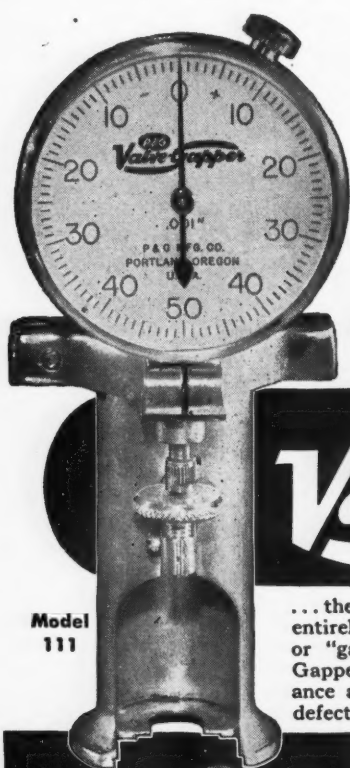
Sales of Willys-Overland Export Corp. also continued to grow in the first three months of 1955, Price said, bringing total Willys utility vehicle sales during January, February, and March to 16,873 units, compared with 11,903 last year.

All sales, he said, are exclusive of passenger cars and military vehicle deliveries and include many diversifications of the widely recognized Jeep four-wheel-drive line of products.

"Our substantial backlog of orders in both the domestic and export markets is further evidence of the unprecedented world-wide acceptance of these prime movers of men and goods," the sales official declared.



TWO MODELS above were recently introduced by Volvo of Sweden. Car in lower photo is a Volvo sports car featuring a reinforced plastic body. The other is the Volvo P 444 which uses a four cylinder push rod operated overhead valve engine.



Model 111

**Don't Set Valve Gap  
"Close Enough"...**

*Set it  
Exactly Right!*

**IN HALF THE TIME**

**P&G  
Valve-Gapper**

... the new precision instrument that utilizes an entirely new principle in adjusting valve clearance, or "gap" on valve-in-head engines. The Valve-Gapper assures micrometer accurate valve clearance adjustment and instant location of noisy or defective hydraulic lifters.

- Reduce Valve Adjustment Time approximately 50 per cent!
- Check the Valve Gap Visually and get Micrometer Accurate readings BEFORE, DURING and AFTER Adjustment.
- The VALVE-GAPPER is Fast, Easy to Use—both hands are FREE to make adjustments while dial indicator registers exact setting.
- Use the VALVE-GAPPER for instant location of defective hydraulic lifters.
- Use the Dial Indicator for other shop tasks.

### MODEL 201—FOR GM DIESEL ENGINES

Enables mechanics, owners, operators to—  
• Adjust Valve Clearance  
• Time Fuel Injectors • Balance Fuel Racks

Order from Jobber or Write P&G Mfg. Co.

**P&G MANUFACTURING CO.** Dept. 12E

2262 N. Albina Avenue, Portland 12, Oregon

Please send me Valve-Gapper literature and prices.

FIRM NAME \_\_\_\_\_

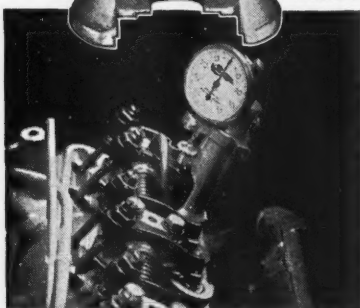
YOUR NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

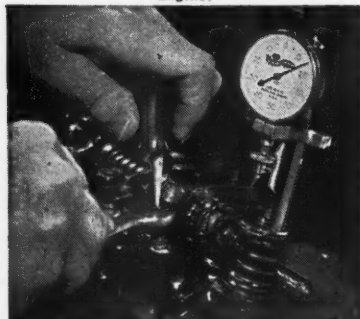
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

ENGINES SERVICED \_\_\_\_\_

MY JOBBER IS \_\_\_\_\_



Valve-Gapper in position on 1954 V-8 Ford Engine.



Mechanic using Valve-Gapper on Chevrolet Engine.

# Charg-A-Can<sup>®</sup>



**Save Time, Labor and Materials  
with this Handful of Climate Control**



## You Benefit 7 Ways

- ① Usable with any type system
- ② Economical—no waste
- ③ Factory control of purity
- ④ Assures accurate amounts
- ⑤ Safe and easy to use
- ⑥ Convenient to stock
- ⑦ Big repeat demand

**Cut Yourself in on Charg-A-Can  
AUTOMOTIVE REFRIGERANT PROFITS!**

Here's the newest sensational development in automotive air conditioning—CHARG-A-CAN<sup>®</sup> Packaged Refrigerants! You'll save time, labor and materials with the greater convenience of one-pound CHARG-A-CAN<sup>®</sup> disposable containers with "Freon-12."\* They eliminate waste, control purity and assure accurate charging of any type car air conditioning system. CHARG-A-CAN<sup>®</sup> refrigerants are expertly analyzed for purity and moisture content before filling under carefully controlled factory conditions. Stock up today with this practical and convenient answer to your car refrigerant needs. Available from Eston wholesalers throughout America.

### Safe and Easy to Use—No Special Skills Required!

CHARG-A-CAN<sup>®</sup> refrigerants are safe and easy to use... require no special skill to install in the system. (1) Attach the convenient TAPACAN<sup>®</sup> valve or similar valve-type puncturing device to CHARG-A-CAN<sup>®</sup>. (2) Operate puncturing device to pierce seal on CHARG-A-CAN<sup>®</sup>. (3) Withdraw part or all of CHARG-A-CAN<sup>®</sup> by desired valve operation. (4) When CHARG-A-CAN<sup>®</sup> is empty, remove from valve and discard. CHARG-A-CAN<sup>®</sup> cannot be refilled.

THE CHARG-A-CAN<sup>®</sup> DISPENSER VALVE acts as valve, puncturing device and connector. Allows you to withdraw part or all of contents. Can be re-used for hundreds of charges.

Stocked by refrigeration wholesalers in all principal cities.

ESTON CHEMICALS DIVISION

**American Potash & Chemical Corporation**

3100 East 26th Street, Los Angeles 23, California  
99 Park Avenue, New York 16, New York



ESTON CHEMICALS DIVISION

**American Potash & Chemical Corporation**

3100 East 26th Street, Los Angeles 23, California

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

\*"FREON" is a Du Pont Trade Mark



## Dodge Trucks . . . . . Continued from Page 63

into additional models.

The gamut of models includes conventional trucks and C-O-E's, Route Vans, Power Wagons, School bus chassis and Forward Control chassis. Included in this are three new Town panel models: standard, deluxe, and Custom Regal.

Seven basic power plants pro-

vide a choice of 12 different power ratings which range from 103 to 202 hp. In the low tonnage class, from one-half to one ton, Dodge offers an option of a 110 hp six-cylinder engine or the 169 hp Power Dome V-8—the latter representing an increase of 24 hp over the V-8 available in 1954.

Tubeless tires are standard

equipment now on one-half and three-quarter ton models and Dodge has available a total of 22 stake or platform bodies in four lengths on the models from one-half to two and one-half ton.

The two-speed PowerFlite automatic transmission may be had on one-half, three-quarter and on one ton conventional and Forward Control models.

The new heavy duty three-speed automatic transmission, called the Super Truck-O-Matic, is offered only with 6-cyl engines on three of the Dodge models. When used in conventional models, this transmission must not be used in tractor-trailer service.

This unit combines a torque converter with a starting torque ratio of 2.16:1, and a three-speed planetary gearbox with forward ratios of 2.308-1.435 and 1.00 and a reverse ratio of 2.009.

One of the outstanding features of this unit is the solid drive in direct gear, meaning that the torque converter is locked out with the gearbox in direct drive, preventing slip and heat loss, thereby increasing the efficiency, also it reduces over-run of the engine in direct gear, and makes down hill engine braking fully effective, as the reverse torque is delivered 100 per cent to the engine.

The transmission shifts automatically and progressively from low gear to second gear to high gear, with corresponding down shifts, and without releasing the accelerator pedal. The shifts are smooth and within a wide range are responsive to the operator's desires.

The kickdown at the driver's option from direct to second gear is accomplished by pressing the accelerator pedal beyond the full throttle position.

By placing the selector lever in low (L) position, the transmission is locked in low gear for heavy pulling or for engine braking in down grades.

Because of the fact that the low and reverse positions are adjacent to each other in the shift pattern the vehicle can be rocked between low and reverse very easily to extricate it from mud and snow.



FOR YOUR PROTECTION  
INSIST ON **SUNNEN**  
MEASURED PIN FITS

**All for Lack  
of "Two-Tenths"**

### Piston Failures are Expensive . . . In Loss of Profit and Loss of Good Will

Many piston failures have been traced to incorrect Pin Fits which do not allow cam-ground pistons to expand properly, resulting in scored and broken pistons.

Whether you fit your own pins or send the work out, we can help you eliminate practically all comebacks from piston scuffing and scoring.

Our 24-page booklet "Just What Is A Pin Fit" gives the complete story, with many illustrations of actual piston failures and their causes. Endorsed by piston, ring and car manufacturers—200,000 requests already filled—why not drop us a card for your own free copy.

**See our exhibit at the Regional Shows in:**  
LOS ANGELES • SAN ANTONIO • ATLANTA  
NEW YORK • DETROIT





# PROVEN BEST for Regular Duty

## GRIZZLY "SYNCRO" BRAKE LINING

Bring 'em to a dead stop . . . alive! Give your passenger car reline customers safer, more positive braking action under all conditions. Give 'em "Syncro," the durable lining. "Syncro" is waterproof, glaze-proof, made of special heat-resistant materials, and *super-tough!* Customer satisfaction begins the minute they see the Grizzly sign outside your shop. This gives you the backing of Grizzly's more than 44 years of making the finest brake linings and brake blocks available to passenger car and truck owners. Your customers know the Grizzly reputation for quality and they'll respect your judgment for recommending Grizzly "Syncro" brake lining to them. Ask your Grizzly Distributor for details. Ask him, too, about "Silvertip" brake lining for power-brake customers and light trucks, and brake blocks for heavier trucks.

Grizzly Manufacturing Division  
Paulding, Ohio



Bear in mind  . . . Ask for

# GRIZZLY

REG. U. S. PAT. OFF.

## SYNCRO

## BRAKE LINING

the arrival of solar radiation. Obsolescence is the very hallmark of progress. The faster we obsolete products, machines, and antiquated, costly ways of working, the faster we raise our living standards and our national wealth. . . .

I, for one, am highly impatient with the reactionary thinking of

some union leaders, who stand resolutely against progress, who resist the introduction of new machines and methods, who seek to preserve obsolete trades and skills, who generally are wedded to the mean and miserly concept of a mature economy that's going nowhere — in short, the advocates of guaranteed annual stagnation.

I am just as impatient with the slavish and stereotyped thinking which has led some businessmen to consider "security" a bad word and to brand all concern for human and social progress as communism or "creeping socialism."

### No Sacred Cows

I'm all for chasing the sacred cows out of the stables of business.

For the first time in history, technological progress, unleashed by the dynamic incentive system, is beginning to give people what they want.

All over the world, people are restlessly, grimly searching for a way of life that will give them what they want — and more and more of what they want. Even we favored and fortunate Americans want more — more security, more independence, more leisure, more freedom from drudgery, more and better homes and schools and communities. There's just no limit to our appetite for more.

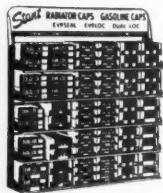


EVERSEAL RADIATOR PRESSURE CAP R-9

Be sure to check regularly cooling systems of your customers' vehicles. Summer drivers invariably overload the cooling system. Hot weather . . . hard pulls . . . neglect . . . not encountered in winter driving of a few miles a day . . . bring about overheating. Regular attention guarantees trouble-free vacation-miles.

### Cooling System Musts

An essential part of the cooling system check is the installation of the proper *Stant EVERSEAL* Pressure cap . . . if the customer's cap is worn, broken, or the wrong cap. *Stant Caps* . . . engineered in co-operation with automotive engineers for original equipment . . . perform under all conditions . . . winter's cold . . . summer heat . . . from valleys to mountains . . . from sea level to desert.



MU-600

### sell the easy way

The new *Stant Merchandiser MU-600* is a perpetually-working silent salesman . . . easy-to-find pressure caps, underhood radiator caps, oil filler caps, regular and locking gas caps . . . requires minimum space. Colorful display. Write for details . . . *naming your jobber.*

STANT MANUFACTURING CO., INC.  
Connersville, Indiana



**Used on America's Finest Automobiles  
as Standard Equipment**

**Armed Forces Week**  
Observe **Armed Forces Week**, May 15-21, 1955, by paying tribute to our Army, Navy and Air Force. Together they make the strongest team in the world to combat aggression and insure our freedom. They are our Power for Peace!

### New Product Group Formed at M.M. & M.

Formation of a chemical products group and appointment of Dr. B. J. Oakes as its general manager has been announced by Minnesota Mining & Manufacturing Co.

The new group, according to President Herbert P. Buetow, will coordinate research, product and sales efforts of 3M's varied chemical line. One of the firm's plants — the Irvington Chemical Division, of Irvington, N. J. — uses cashew nut oil to manufacture a number of products widely used in the electrical and automotive fields.

# DOUBLE-ACTION PROFIT-MAKERS

(NEW *GoldenGlide* SHOCKS)

## SELL THEMSELVES!

Whenever a customer needs new "shocks",  
just let him see the new Houdaille **GOLDEN GLIDE**  
...and you'll make a sale of two or possibly four!  
Show him the rich, hammered golden finish.  
The fluted dust and stone shields. The distinctive design.  
And, remember, **GOLDEN GLIDE** has the  
latest improved valving!



A Product of  
**HOUDAILLE**

**"PAIR-UNIT"  
BOX**  
Helps Sell  
**TWO, too!**

Eye-catching "Pair-Unit"  
package eliminates duplicate  
inventory. ✦ Lets you stock  
**GOLDEN GLIDES** in pairs  
or singles... and helps you  
sell either way.

**PLUS . . . 13,659,520 "salesmen" at work**  
for you through the pages of these magazines . . .

— the biggest advertising push in our history!  
So cash in! If you can't get immediate delivery  
in your area, write or wire collect: Houdaille-  
Hershey Corporation, Buffalo 11, New York.



**ON THE  
PROFIT SIDE it's**

**DOUBLE-ACTION**  
*GoldenGlide*  
CUSTOM-BUILT SHOCK ABSORBERS



## 273 Tirespreader

**Pecoff Company:** This manufacturer has marketed a small portable tire-spreader. The tool is designed to spread the beads wide and lock in position to permit easy inspection by the customer or repairman, the maker states. The

unit can be used on a tire changer or fastened to a bench, it is said.

## 274 Compression Gage

**Snap-on Tools Corp.:** A compression gage, said to be useful on late model V-8's where there is a lack

of clearance between the spark plug holes and fender wells and manifolds, has been marketed by this company. The unit consists of a gage, 16 inches of flexible hose, a quick-disconnect coupler, and a spark plug hole adaptor. A check valve in the end of the adaptor holds the compression reading until the coupler is moved, the maker states. Two adaptors are available for standard 14mm spark plug holes and one 18mm for the 1955 Ford.

## 275 Dispenser-Bleeder

**E. I. du Pont de Nemours & Co.:** An inexpensive brake fluid dispenser-bleeder unit which can be operated by one man, is portable, and which is said to require no air hose connection is being offered by this maker. The unit makes it pos-



sible to fill master cylinders, flush, and bleed hydraulic lines simultaneously, the maker claims. It is equipped with a four-way bleeder plug that fits most master cylinders. No aeration or fluid contamination is possible, according to the firm.

## 276 Radiator Conditioner

**Radiator Specialty Co.:** A cooling system conditioner has been announced as an addition to the "Solder Seal" line. Known as M-P Sealant and Conditioner, this new formula is said to stop seepage and seal leaks in radiators, blocks, and heat gaskets. It is claimed to

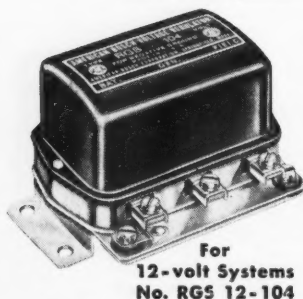
(Continued on page 118)

### THE BIG REGULATOR MARKET

*in the  
palm of  
your hand*

This money-making 3-for-ALL Kit puts the big Voltage Regulator Replacement Market right in the palm of your hand, and extra profits in your pocket. With this small stock you can handle practically any service requirement for 6-volt electrical systems. It puts 3 versatile American Bosch Regulators right at your fingertips—all in one neat, space-saving Package with the application data you need right on the Display Carton for quick reference.

Widely used as original equipment, these rugged American Bosch Regulators are competitively priced for easier sales. They feature temperature-compensated cut-out and voltage elements, platinum-tungsten contact points, extra resistor units, and plated steel parts for corrosion protection. For 12-volt systems, other new American Bosch Voltage Regulators provide the same dependability and precision essential for today's new cars. Ask your Jobber for details and sales-active prices. American Bosch, Springfield 7, Mass. A Division of American Bosch Arma Corporation.



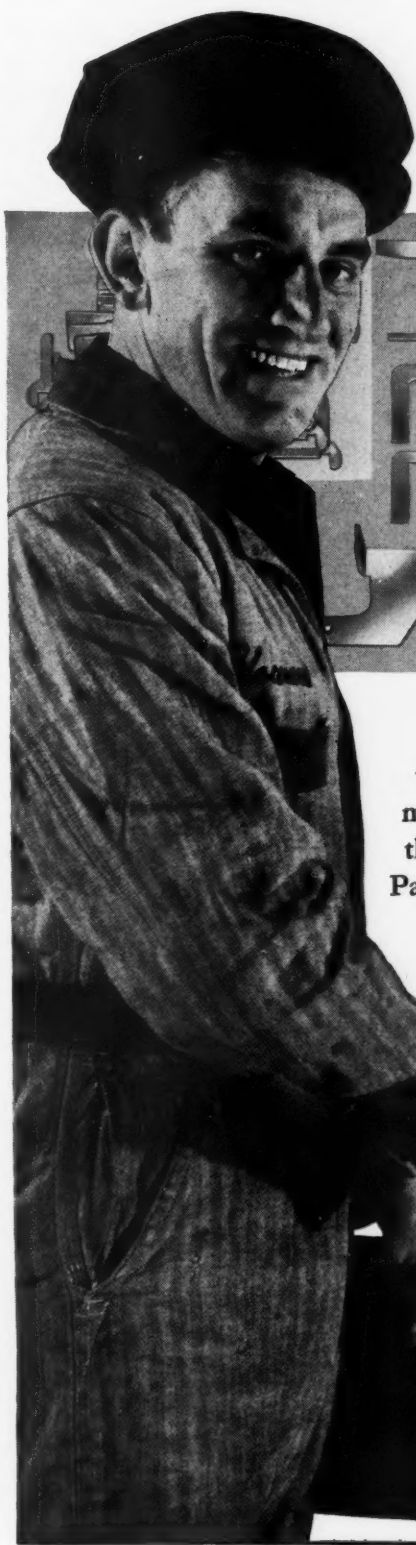
# AMERICAN BOSCH



"I make more money on every carburetor job...with

**Snap-on**

**Special Carburetor Service Tools"**



Take the whole wide run of service jobs... only automatic transmissions will average trickier and more time-consuming than modern carburetors! But your money-making angle is no different than with a lot of other jobs... skilled know-how *plus the right tools!* Particularly on carburetor work that means *special* tools. A selected set of correctly designed "Specials" that will help you handle the tedious, poky operations deftly, swiftly, *profitably*. Your Snap-on Man has them for you... gauges (many special types), pullers, inserters, unloaders, extractors, wrenches, bending tools, sockets... a complete range of "Specials" most needed for servicing each model of carburetor on all modern cars. Available also in complete sets with necessary standard wrenches. Ask your Snap-on Man to show you the many new Snap-on carburetor "Specials."

**SNAP-ON TOOLS CORPORATION**

8036-E 28th Avenue • Kenosha, Wis.

\*Snap-on is the trademark of Snap-on Tools Corporation.



## New Products . . . . . Continued from Page 116

lubricate water pumps and inhibit the formation of rust and corrosion.

### 277 Headlight Control

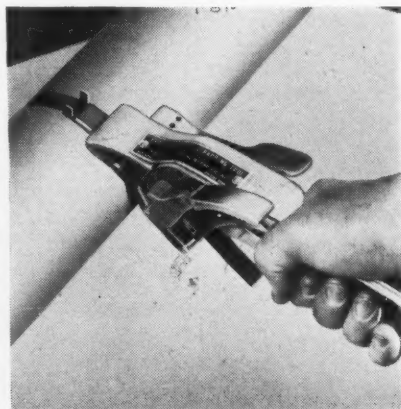
**Maico Company:** This company has introduced the Dim-O-Matic, an automatic headlight beam con-

trol. The unit is said to have adjustable sensitivity which permits the driver to control the amount of light necessary to switch his lights to low beam, in addition, he can over-ride the control completely with the regular foot dimmer switch, according to the maker. The device is said to be easily installed on any car includ-

ing those with tinted or curved windshields.

### 278 Strapping Tool

**Independent Metal Strap Co., Inc.:** This company has introduced a self-contained strapping tool which is claimed to make metal strap easily workable. Designed to make permanent clamps of any size, the "Royal HL Strapper" is said to eliminate the need for dif-



ferent premeasured clamps. The tool forms an airtight seal and is said to have unlimited application. The strapper can be carried in a tool box, and needs no support to work effectively in small spaces, forming clamps as small as one inch, the maker states.

### 279 Seat Spring Pad

**Visking Corp.:** Termed the "Elast-O-Pad" this item is said to prevent the cushioned section of a car seat from sagging or cupping in the open spaces in the top surface of the cushion or back spring assembly. The pad is a continuous plastic lamination consisting of upper and lower sheeting of Visqueen polyethylene film. Elast-O-Pad is said to be designed for use almost entirely as a part of the padding member and usually extends the entire length of the padding member.

**Laying off a faithful worker to prevent a cut in your own compensation is the sort of thing that makes glad news in Moscow.**

**FEATHERED SHIMS**

**BLAISDELL MFG. CO.**

BLAISDELL MFG. CO., 1350-A CORONADO AVE., DEPT. A-1  
LONG BEACH, CALIF.

NAME \_\_\_\_\_

FIRM \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

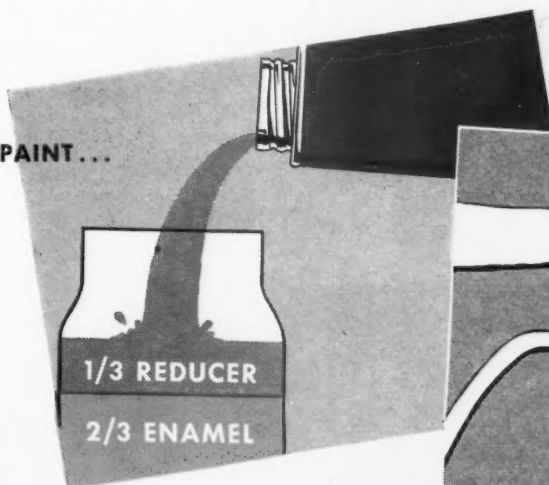
#### MAIL COUPON FOR FREE SAMPLE SHIMS

Without obligation, send me FREE  
sample Blaisdell Tapered Shims, and  
name of nearest jobber.

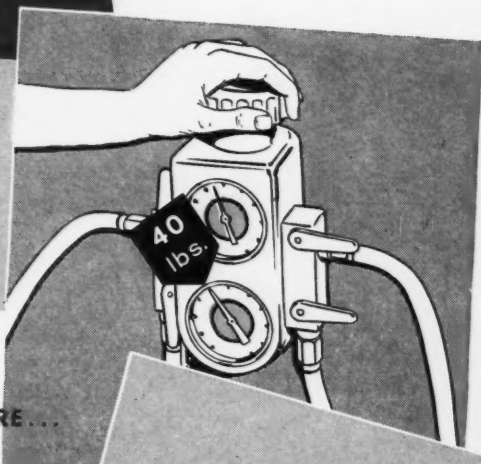


★ ONE OF THE 1955 PARADE OF NEW "OK" PRODUCTS ★

USE LESS PAINT...



USE LESS PRESSURE...



## This new, low-pressure reducer gets enamel out of dust FAST... puts more paint on the car... less up the stack!

Here's new, fast-acting help in getting cleaner, richer enamel jobs... brilliant, sure results with opalescents!

KEM "FLO-GLO" Reducer is specially designed to give new, fast, flash-off and out-of-dust time. At the same time, you get the flow-out and leveling needed for the finest quality jobs—plus other important advantages, too. That's because "FLO-GLO" uses LOWER spraying pressure (40-45 lbs. instead of 60-75) and GREATER reduction (50% instead of 25%).

Result: More paint on the car... less up the stack... *cleaner* jobs with outstanding gloss... better dispersion with opalescents... important time savings on *all* enamel jobs! Check your OK Automotive Jobber—try this new "star performer" today! The Sherwin-Williams Company, Automotive Division, Cleveland, Ohio.

# SHERWIN-WILLIAMS

AUTOMOTIVE FINISHES



GET MORE FILM ON THE CAR,  
WITH LESS DUST!



## NEW

KEM®

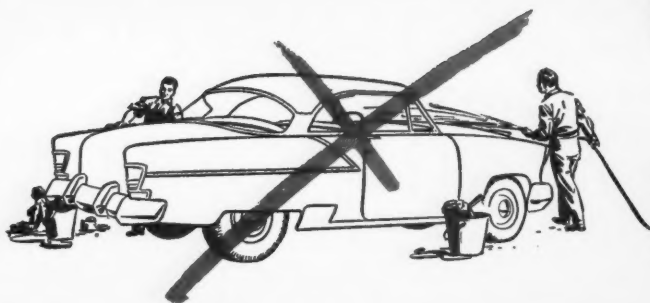
## FLO-GLO REDUCER

No. 183

**Ask about all these  
5 new star performers!**

- ★ NEW OPEX® "SPEED-FILL"™ PRIMER-SURFACER
- ★ NEW KEM® RED OXIDE PRIMER
- ★ NEW KEM "FLO-GLO"™ REDUCER
- ★ NEW OPEX "POTENT"™ CONCENTRATE
- ★ NEW OPEX "SPOT-SOLV"™ LACQUER REMOVER

\*Trade-Mark



# DOUBLE

**Easy does it-**  
THE WEAVER WAY



**Clip and mail coupon for details**

**WEAVER MANUFACTURING COMPANY,**  
Springfield, Illinois

Please send full details on profit-producing  
Car Washer. I understand there is no obligation.

Name \_\_\_\_\_  
Firm Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

# WEAVER

# your car washing profits!

## WEAVER AUTOMATIC OVERHEAD CAR WASHER

**cuts washing time in half -- with no increase in personnel**

In contrast with the old-fashioned slow method of bucket, sponge and hose — one man using a Weaver Automatic Car Washer can turn out three or more complete wash jobs per hour.

The records speak for themselves. A car dealer on the Pacific Coast reports that his Weaver Car Washer enables his one operator to wash a car complete in less than 17 minutes... In Washington, a service station, using a Weaver Car Washer, washed 68 cars in one day — and also sold 840 gallons of gas to those 68 customers.

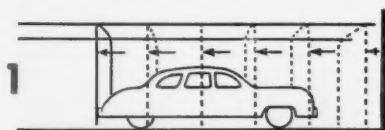
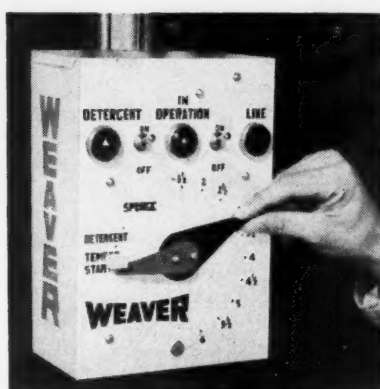
The time-saving, profit-producing results that others are getting — YOU can get... The Weaver Car Washer per-

fectly meshes manual duties with automatic operations. On one press of a button, the Washer's exclusive "Spray Arch" delivers a tempering stroke, detergent application, stops for sponging interval, proceeds with 4 clear water rinses, and automatically shuts off. The unit is easily adaptable to man-power available. It can be shut off at any stage of cycle and started again from same point.

Overhead suspension of Washer frees floor of all obstructions. Special, splash-proof water delivery eliminates need for boots, aprons, special floor drains, large inlet pipes, storage tanks, splash walls or curtains. Economically priced at only \$825.00 complete.

**SEE YOUR WEAVER JOBBER TODAY OR WRITE US FOR BULLETIN MA-710**

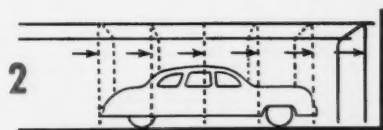
### "PUSH BUTTON" OPERATION SPEEDS WASHING



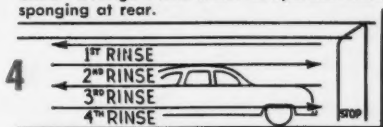
**1**  
**TEMPERING CYCLE.** On press of button, "Spray Arch" automatically starts and moves length of car spraying it with clear water while front wheels are hand washed.



**3**  
**SPONGING CYCLE.** To permit completion of manual sponging, the machine stops at end of "Detergent Cycle" for an adjustable interval which is pre-set to suit manpower available.



**2**  
**DETERGENT CYCLE.** At end of "Tempering Cycle" the "Spray Arch" automatically reverses direction, sprays car with "Weaver-Gloss" Detergent and water as operator starts sponging at rear.



**4**  
**RINSING CYCLE.** After "Sponging Cycle," unit automatically starts, delivers 4 clear water rinses, and automatically shuts off.

**WEAVER MANUFACTURING COMPANY, SPRINGFIELD, ILL., U.S.A.**

## SERVICE SHOP EQUIPMENT

Complete Weaver line includes: Twin Post Lifts... Single Post Frame Type Lifts... Unit Lifts... Bumper Lift... Car Washers... Wheel Alignment Equipment... Headlight Testers... Brake Testers... Wheel Balancing Equipment... Jacks... Wheel Dollies... and Air Compressors.





NEW MERCURY MONTCLAIR, a four-door sedan, is the 11th model to be offered by Mercury this year. Only 58½ inches high, it has the same low silhouette as the '55 Mercury Montclair hardtop coupe. The four-door Montclair is powered by an overhead Valve V-8 engine. (Photo left)

## June 1 Opens DOOF Campaign

DOOF month—an annual body business booster campaign which has become an “old friend” of the nation’s auto refinish industry—is geared to go into action again June 1.

For the fourth straight year, the “Get the Dents Out of Your Fenders” program, commonly known as DOOF, will offer service personnel in more than 100,000 body shops and garages a proven method for increasing their auto refinish business.

On the premise that business is available for the asking, this year’s DOOF campaign is keyed to a theme of savings for the man whose car is dented. Posters, like the one in photo, and window streamers will encourage him to “Save Dollars Now During DOOF.”



The industry-wide program, which is underwritten annually by Minnesota Mining and Manufacturing Co., of St. Paul, will be conducted through automotive wholesalers, car dealers, the service departments of automobile manufacturers, and independent refinish shops.

Starting May 15, free DOOF kits will be mailed to all shops which have requested them. The kits may be ordered from 3M salesmen or from the 3M Company.

New way to sell shock absorbers!



# BRIGGS

Hydro-Muscle®

## RIDE CONTROL

- Be a ride control specialist. Sell Briggs Hydro-Muscles from high-profit, fast-action, 12-shock assortment. Potent tie-in sales tools included FREE! Ask your NAPA Jobber for the full facts.

AS ADVERTISED IN  
The Saturday Evening  
**POST**



No wonder BRIGGS business is BIG business!

# EQUIPS WRECKER for PROFITABLE COMMERCIAL USES!

**HOLMES**  
Offers *New*  
**Ad-Mor-Length**  
**BOOM**

HERE's a new and useful accessory that opens up an entirely new source of earnings for Holmes Wrecker users. It's the new Ad-Mor-Length Boom that permits a Holmes Power Wrecker to be used for all kinds of commercial uses, yet does not interfere with regular towing and recovery work. The installation of this simple device, with its adjustable sections, makes the average wrecker ideal for loading, unloading and installing of many heavy building materials, and industrial equipment. It enables the wrecker to be efficiently used for lifting Big, Bulky objects up various heights to 38 feet.

(Above) Easily Handles Big Tank. Assembly shows use of base plate and top combination with one 8 foot section added. Rated to lift 5 tons a height of 14 ft.

(Right) Unloading Steel Frames. This assembly with two 8 ft. sections added has the capacity to lift 2½ tons a height of 22 ft.



## Built In Sections For Quick Assembly To Desired Length

The Ad-Mor-Length Boom is well adapted for use with HOLMES Double-Boom Wreckers. One of the wrecker lines supports and controls the lift while the other line is used to raise the load. The base and top combination are 6 ft., but can be extended up to 38 ft. by the use of 8 ft. sections. When not in use, the entire boom can be quickly and easily removed. Each section is constructed of 3 inch standard pipe, spaced with 3 inch channel and well braced. Furnished in any desired length with sections added as desired. See your jobber or write factory for details.

(Left) Ideal for High Lifts. This assembly shows base and top sections connected with four 8 ft. sections and simple trust arrangements used on high lifts. Boom, when raised to utmost position, has rated capacity to lift 1 ton a height of 38 ft.

Lifts  
**1 TON**  
**38**  
**Feet**

### LIST PRICE Ad-Mor-Length Boom

BASE and TOP Combination  
6 foot length . . . **\$80.00**

Additional sections in . . .  
8 foot lengths . . . **\$60.00**

All prices F.O.B., Chattanooga

**HOLMES**  
Wrecker Equipment

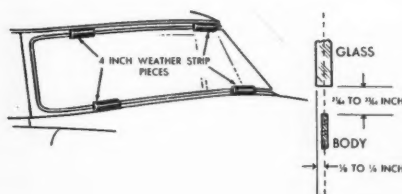
**ERNEST HOLMES COMPANY - Chattanooga, Tennessee**



# Service Suggestions

## Method for Checking Windshield Clearance

On 1955 Plymouth models the windshield opening can be checked for alignment by installing the glass in the opening with four pieces of four inch weather-strip (enough to support the windshield in place) and checking the clearance between glass and fence. A properly centered glass has 21/64 to 33/64 inch clearance



on all sides. In addition, there is 1/8 to 1/4 inch distance between the outer edge of the glass and the centerline of the fence. Any spot on the body that varies from these clearances should be re-worked, by either grinding away the fence or straightening the opening.

Caution: When re-installing glass and mouldings, tighten the moulding screws just enough to prevent rattles; do not tighten too hard.

## Proper Procedures for Convertible Top Care

Two basic materials have been released for the 1955 Lincoln-Mercury convertible tops. Rayon Cotton Sheeting—black, white, blue, green and tan. Orlon—white on tan, black on black, and black on tan. The following procedures are recommended for cleaning these tops.

### Rayon and Cotton Sheeting

This material is quite stable throughout a wide temperature range although it may shrink and fade slightly after extended use.

1. Brush thoroughly with a whisk broom or vacuum cleaner.
2. Wash with warm water and mild soap. Completely work the whole top with soap and water and be sure to rinse thoroughly. This rinsing is extremely important. Any soap left in the material will tend to fade it. Do not use hot water as it tends to shrink the material.
3. Remove any grease stains or bird droppings with Lincoln Spot

Remover — BH-19521-A — before washing. 4. Allow the top to dry thoroughly before lowering to prevent mildew.

### Orlon

Orlon is a plastic material highly resistant to fading and weathering. This type of material becomes stiffer than cotton and rayon at low temperatures. It cannot stand temperatures above 200 degrees F, therefore it should never be exposed to paint ovens.

1. Wash the top thoroughly with



World Bestos "PRESCRIBED FRICTION" SETS... Finest quality, dry-mix, rigid molded segments, engineered for each type of vehicle. Seven different friction formulas used in various combinations.



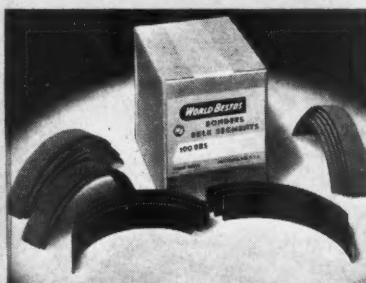
World Bestos "GRIDLOCK" SETS... First quality molded wireback lining with controlled friction characteristics for most popular cars and light trucks. Quiet, dependable action, long, uniform wear. Ideal for cars with worn brake parts.



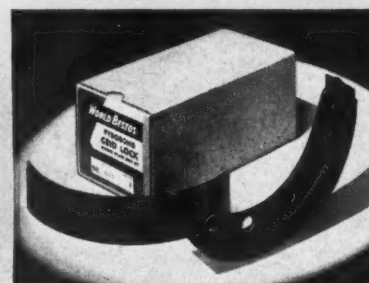
PACKAGED SETS FOR BONDING: World Bestos "Prescribed Friction" and "Gridlock" Sets... same as above, except are undrilled and unchamfered, and are supplied either plain or precemented ready for bonding.



World Bestos "X-GL" COMBINATION: High quality dry-mix and wireback combination for bonding. Simplifies stocking, gives safe bonded brake performance at lower cost... for all popular cars and light trucks.



World Bestos BONDER'S BULK SEGMENTS: Top quality dry-mix segments and Gridlock "smooth-back" segments for bonding. Universal sizes to fit maximum number of vehicles with minimum inventory.



World Bestos BONDED SHOE EXCHANGE: World Bestos Authorized Bonders in principal cities supply you with shoes already bonded with correct World Bestos lining specified for cars, commercials and light trucks.



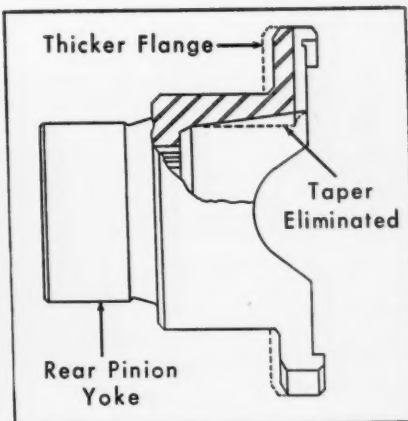
synthetic detergent, and rinse well. Rinsing is important because any detergent left in the material can cause it to fade. Caution: Synthetic detergents in strong solution will remove the waxes used in car polishes. Rinse all surfaces that have been exposed. 2. For grease stains and bird droppings, scrape as much as possible off the material with a wooden blade. Clean the soiled area with carbon tetrachloride, by applying small amounts of the fluid to a clean white cloth and

rubbing the spot lightly. Allow to dry. Caution: Never use cleaning fluids, naphthas, paint thinners or solvent, as they will damage the material and lead to premature failures. Never use harsh, gritty cleaners or wire brushes on this type fabric. 3. Sometimes small spots may be removed with an art gum eraser.

### Differential Pinion Yoke Strengthened

Effective with Engine N. 27403

(approx.), all 1955 Cadillac cars will have a new differential pinion shaft yoke, strengthened to provide better service under the higher torque loads imposed by the 1955 engine and transmission. The flange has been made thicker and the taper in the body eliminated, making the body thicker throughout most of its length. The dotted lines in diagram show the outline of the new yoke.



Due to the thickened flange, new, longer mounting screws, Part No. 1463229, will also be necessary when the new yoke is used as a service replacement for the old type. Servicemen should not use the old mounting screws because there will be insufficient thread engagement with the rear universal joint.

### Pull Hy-Fire Ignition Wires at Connectors

Plymouth Hy-Fire V-8 ignition wires should be grasped as close to the end of the wire as possible, at the reinforced section near the spark plug. Pulling on the rubber reinforcement, which contains the connector, prevents placing a strain on the wire and causing a possible internal break. A break of this type could occur without showing on the wire covering, but nevertheless would cause a weak or late spark and possible misfiring of the engine.

**Has each of your salesmen been given a set of figures to show the prospect what he stands to lose by dealing with a bootlegger?**

## WORLD BESTOS...

Makes your passenger car brake work  
**EASIER..** More Profitable  
*and more in demand!*

World Bestos gives you complete coverage of every brake lining need, for passenger cars, taxicabs, commercials and light trucks. Here is a top-quality line . . . engineered to give safe, dependable performance for each type of vehicle and brake system. This means simplified installation . . . reduced shop time per job . . . more efficient, more profitable shop operation. The resulting customer satisfaction will build your reputation . . . bring in new business and repeat business to swell your sales volume!

### Get started with World Bestos NOW!

For full information about the complete World Bestos Line, see your World Bestos Distributor, or write direct to New Castle.

World Bestos gives you  
**MORE STOPPING POWER!**



## WORLD BESTOS

NEW CASTLE, INDIANA

## Body Panels . . . . . Continued from Page 65

If the wheel house has not been undercut the lower edge of the skirt may lap against the fiber floor pan. Should this be the case use vise grip pliers to hold these parts steady when doing the final welding job.

Align the rear fender and scribe the location of the fender anchor bolt holes in housing. Remove the

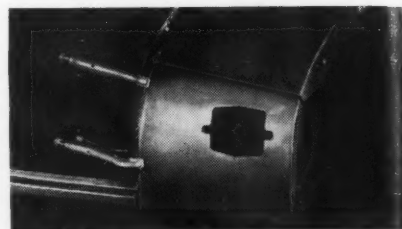
fender and wheel housing and drill the holes. After this install the fender anchor nuts by brazing them into position.

The sections are now ready for final welding operations. Put the wheel housing into the body opening, align and weld.

It is a good idea to tack weld through the original holes that

were drilled in the upper quarter panel when the damaged panels were being removed. In any event, it is <sup>best</sup> to tack at two inch intervals.

Note: Extreme care should be taken when welding near the gas tank filler neck.

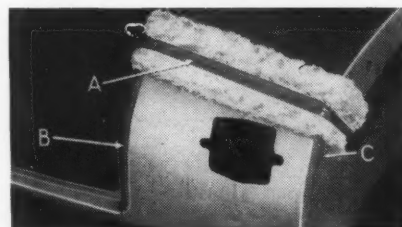


A new panel is shown being held in place by vise grip pliers on the trunk side and sheet metal screws on the wheelside.

To prevent buckling, finish welding the housing in short sections, with each weld being not more than an inch long.

Be sure and use a good sealer around the repaired area in the trunk to prevent future seepage of dust and water. It also serves as a noise deadener.

After finishing the welding operation, apply a prime coating and replace the fender and bumper assemblies and interior.



Wet asbestos should be used liberally around areas to be welded. Letters indicate tack welded points.


### Rear Quarter Panel (Lower Section)

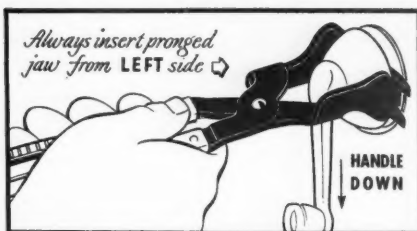
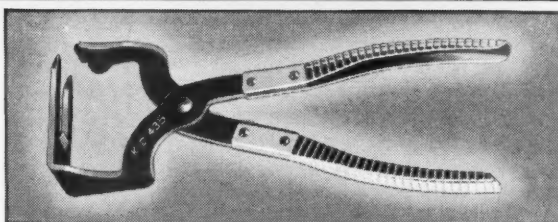
To replace the damaged lower section of the rear quarter panel, first remove the fender and fender anti-squeak. With great care loosen and take off the rear compartment gutter and the rubber weather strip adjacent to the area of repair. Turn back the floor mat and remove all other inflammable objects to prevent fire when welding. The tail light assembly, its rubber gasket and all wiring in

(Continued on page 130)

## NEW! K-D DOOR HANDLE REMOVER for ALL 1955 Chrysler-Built.

### K-D No. 435

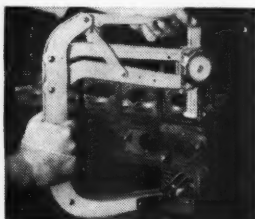
Safely and quickly removes interior door handles using a spring clip like this 



Interior door handles on these cars are now held by a spring clip retainer. This clip must be released from a groove in the shaft before handle can be removed. The new K-D 435 is specially designed to do this job quickly without any possible damage to upholstery. Tool also used for removing interior door trim panels. All steel rustproofed construction. Non-slip handle. 9" long.

**SURE AND SIMPLE TO OPERATE.** Tool is inserted from left side with the shank of the handle down. The pronged jaw slides between the handle boss and the upholstery protecting washer until the lip between the prongs contacts the spring clip. By squeezing the handles together gently the spring clip is released from its groove and handle can be pulled off. Here's another K-D Tool to make another hard job easy.

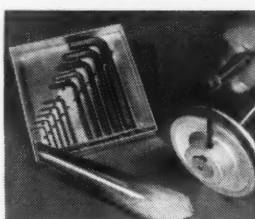
### GET K-D TOOLS FROM YOUR JOBBER



380 Valve Spring Compressor almost universal. For valve-in-heads, L-heads old or new. Most popular valve tool in U.S.A.



428 Hose Clamp Pliers to remove, install all sizes wire clamps. Jaws swivel thru 180 degrees, so you can reach 'em in any position.



30 Socket Screw Key Set. 11 hex keys, sizes .050" to 3/8" in rustproof metal kit with extension handle.

**FREE**-1955 Edition famous K-D Bulletin on servicing valves in Ford built engines. Write for No. 255, K-D Mfg. Co., Lancaster, Pa.



Ask any "old-timer" in the shop about K-D Tools... chances are he has valve tools in use bought years ago ..... still dependable, still making his hard jobs easy!!!

# WHAT A MARKET!



**ONE ROCHESTER**

**CARBURETOR FITS**

**OVER 10,000,000**

**CHEVROLETS**

**NOW ON THE**

**HIGHWAYS!**

Meet a good mixer! It's a Rochester—the perfect carburetor replacement for 1932-1952 Chevrolets! You can't top a sales and service potential like this! Over 10,000,000 Chevrolet owners can rely on *one* precision-engineered unit for just the right fueling job! Rochester Carburetors are dependable and durable, rugged and responsive—engineered to fuel the finest automobiles on the road today! That's why you'll find there's such a wide market for Rochester. It's smart to stock Rochester Carburetors every time!

CARBURETORS BY

**ROCHESTER**  
**PRODUCTS**

ROCHESTER  
PRODUCTS  
DIVISION OF  
GENERAL MOTORS  
CORPORATION  
ROCHESTER N.Y.



# no come backs

# with the rings you know!

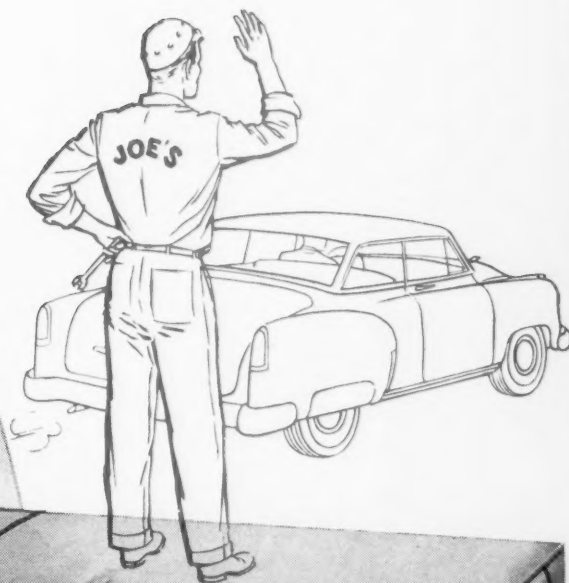


The biggest headache a mechanic or shop owner ever had is a "comeback." It loses money for the mechanic; it loses money for the shop owner and it usually ends up losing a customer. You can avoid comebacks by using McQuay-Norris CHROME-CONTROL LEAK-PROOF Piston Rings because they are engineered for the replacement field; they are quick seating and they really do a job right *now*.

**CHROME-CONTROL LEAK-PROOF PISTON RINGS WILL OUT-PERFORM ANY OTHER SET IN THE "HARD-TO-HOLD" JOBS REGARDLESS OF KIND, DESIGN OR PRICE.**

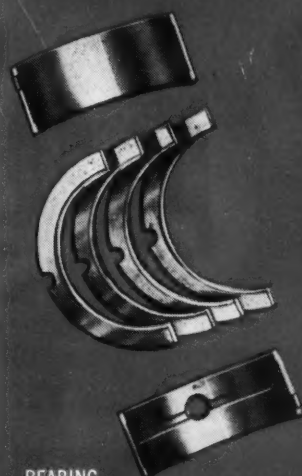
**McQUAY-NORRIS MANUFACTURING CO.**  
**ST. LOUIS 10, MISSOURI**

**McQUAY-NORRIS  
COMPLETE LINE  
SERVICE FOR  
ALL MAKES AND  
MODELS OF  
CARS, TRUCKS  
AND TRACTORS**



**McQUAY-NORRIS**

**CHROME  
CONTROL  
LEAK-PROOF**  
REG. U. S. PAT. OFF.  
**PISTON RINGS**

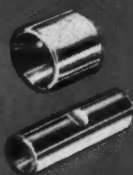


**BEARING  
SERVICE**



**PISTON  
SERVICE**

**PIN AND  
BUSHING SERVICE**



**SLEEVE ASSEMBLY  
SERVICE**



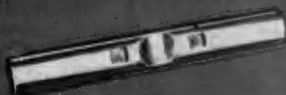
**VALVE SERVICE**



**WATER PUMP  
SERVICE**



**SOCKET AND  
ROD SERVICE**



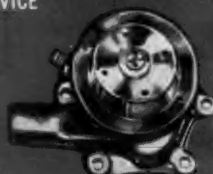
**KING BOLT AND  
BUSHING SERVICE**



**SHACKLE SERVICE**



**FRONT END SERVICE**



## Body Panels . . . . . Continued from Page 126

this area must also be removed.

Make the initial cut just above the damaged portion. But make certain that this cut is below the original weld joining the corner panels to the rear quarter panel.

The gutter part of the rear compartment opening should not be touched in this operation. A neater job and better alignment

is possible if this is kept intact.

Follow the procedure mentioned earlier in drilling out the spot welds that hold the lower part of the panel to the housing and the gutter section to the rear compartment opening. Then cut the remaining part of the panel away from the body section of the floor panel pan.

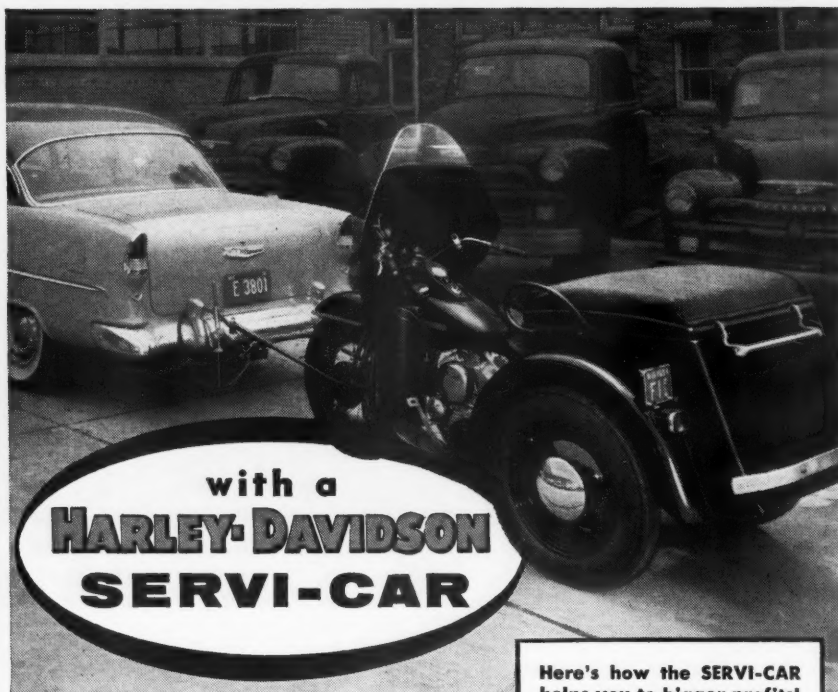
Carefully measure, scribe and cut a new replacement panel to fit the prepared opening. Put the trimmed panel in place and hold it securely at the trunk with vise grip pliers. Use sheet metal screws to hold it on the wheel housing side.

Pack a generous quantity of wet asbestos around the panels to prevent buckling when welding. Once this is in place tack weld at two inch intervals around the entire panel and then finish welding.

Use body solder for fill and perform the final finishing operations including the application of a prime coat and paint.

We STILL meet few people who have ever been solicited by automobile salesmen until they themselves have called on one or more dealers to look over cars.

## How to **DOUBLE** Your Service Territory



With a Servi-Car on your "staff," you can actually add many square miles to your service territory. Users tell us that Servi-Cars more than doubled the number of their customers. And you'll be able to do the same with this speedy pick-up and delivery service. That means more satisfied customers, more repeat business . . . and you'll keep costly repair and service equipment profitably busy all day long. Ask your Harley-Davidson dealer for your **FREE** copy of the Servi-Car booklet: "It Pays to Give Service." Or write: HARLEY-DAVIDSON MOTOR COMPANY, Dept. MA, Milwaukee 1, Wis.

### Here's how the SERVI-CAR helps you to bigger profits!

- Keeps business rolling in all year 'round.
- Builds good will with convenient service.
- Gets jobs in and out of the shop quickly.
- Provides continuous advertising wherever it goes.
- Saves time on errands for parts and accessories.
- Keeps costly shop and service equipment busy.
- Gives safe, economical, easy-to-operate service.

## SERVI-CAR SERVICE SELLS MORE SERVICE

## AMC Spring Paint Colors Announced

American Motors Corp. has announced that its 1955 Hudson and Nash Ramblers are blossoming out in a new spring-like array of special two-tone combinations.

The new paint combinations, called Fashion-Tones, are available in 13 options on the Rambler Custom Cross Country, Custom Country Club and all four-door sedans.

Both Nash and Hudson expect that 50 per cent of their normal two-tone production will be devoted to Fashion-Tones.

On the Cross Country four-door station wagon, the secondary color is used on the upper portion of the rear fender and rear door and is encased in a new molding strip. The same color is used around the window area and below the base molding.

On the four-door sedan the treatment is similar, except that the roof and rear deck also are painted in the secondary color.

On the Country Club hardtop, the basic color sweeps across the roof in a seven-inch-wide band just above the rear window. The band is set off by a new molding. The secondary color is used on the remainder of the roof and below the base molding.





## "We're all set for summer with Quaker State Medium HD"

Yes — with just one oil, Quaker State MEDIUM HD, you can provide the best in lubrication for the majority of your summer customers. It meets every normal summer driving need. And this one oil assures you quick turnover and steady profits.

Quaker State MEDIUM HD is super-refined from world famous 100% Pennsylvania Grade Crude Oil. It's the oil that provides the *Miracle Film* of protection on

moving engine parts—a development of Quaker State's advanced engineering and research. And it's famous for *endurance*—it lasts longer through hottest weather and hardest driving.

Quaker State products are backed by powerful and consistent national advertising. They're high in prestige. They assure top performance. They bring in steady, worth-while profits!



**QUAKER STATE OIL REFINING CORPORATION, OIL CITY, PA.**

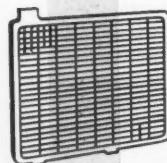
Member Pennsylvania Grade Crude Oil Association

# DELCO'S ALL-NEW EXTRA-DUTY GUARANTEED DRY CHARGE CAN BE STORED IN



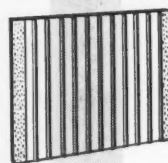
## EXCLUSIVE NEW DELCOLOY GRID

Delco's unique grid design increases battery life as much as 100 percent by even distribution of current and a superior resistance to overcharge and corrosion.



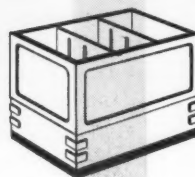
## SUPERIOR RUBBER SEPARATORS

Delco's microporous rubber separators offer a new high in resistance to vibration, acid attack, peroxidation and severe temperature ranges.



## HARD RUBBER THERMO-RIGID CASES

Delco's genuine hard rubber case is completely resistant to acid absorption, heat, bulging, warping, or other distortion.



★Listen to Lowell Thomas on CBS Radio Network—See your newspaper for time and station.

WET OR DRY BATTERY ★★★★★★★

FOUR YEARS!

INDEFINITELY ★ ★ ★ ALWAYS FRESH

Think of the terrific sales advantage you'll have when you offer your customers a four-year guarantee on a nationally advertised, nationally accepted battery like Delco! For years the name has stood for dependable power—power that is the result of the vast research and testing facilities of Delco-Remy and General Motors. *Engineered* power that has made Delco the first choice of leading car, truck and bus manufacturers. Power that is backed by a new four-year guarantee!

See how, wet or dry, the Delco Extra-Duty line with a four-year guarantee really puts you in the driver's seat when it comes to selling batteries!



Delco has perfected a revolutionary idea that greatly simplifies the handling, storing, and sales of batteries. It's the all-new Delco Extra-Duty dry charge battery. Now the batteries you handle can be stored indefinitely, in any climate, and still be just as fresh as if you picked them off the production line yourself. They are not activated until you sell them. Then you add the electrolyte—and instantly, they are ready to go.

See your Delco battery distributor soon—find out all the ways you stand to profit by handling Delco's all-new Extra-Duty dry-charge battery—the freshest power money can buy!

## NEW DELCO PACKAGED ELECTROLYTE

ZIP...CLIP...POUR



ZIP off the top of the sturdy fibre board container, with the built-in pull string.



CLIP the corner of the acid-proof polyethylene bag that's attached permanently to the container.



POUR easily from this disposable container which comes in two sizes, to meet every battery need.

*A General Motors Product*

A UNITED MOTORS LINE





## Committee Reports On Traffic Safety

Traffic deaths in the United States were reduced in 11 of the last 14 months, but most of the Nation's communities still face the necessity of establishing effective safety programs, the President's Action Committee for Traffic Safety has reported.

This appraisal was embraced in

the Committee's first annual report, made public by its chairman, Harlow H. Curtice, president of General Motors.

Curtice stated that the Committee would give its support to a 1955 "S-D Day"—"Safe Driving Day"—such as was held on December 15, 1954.

The lack of effective accident prevention programs in the Nation's communities was shown by the first analysis of the over-all

traffic safety situation in the United States ever made. It was made for the Committee by the National Safety Council.

## Borg-Warner Names New Board Members


Four new members of the Board of Directors of Borg-Warner were elected by the corporation's stockholders in their annual meeting recently.


All officers and members of the operating committee of the company, they are: R. S. Ingersoll, Administrative Vice President; L. G. Porter, Administrative Vice President; Robert W. Murphy, Vice President and General Counsel; and Albert Steg, Treasurer and Controller.

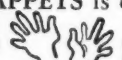
**The principal reason why dealers lose service customers is that they have no adequate plan for retaining their business. As simple as that.**





## DOUBLE PROFITS with JOHNSON adjustable tappets



The right time to install JOHNSON Adjustable Tappets  is anytime you have the head

off a 1932-1953 Ford or Mercury or a 1952 or earlier model Ford Tractor.  By

recommending and installing JOHNSON Adjustable Tappets at this time you can make TWO PROFITS on ONE JOB. And installing JOHNSON TAPPETS is easy. All you need is a pair of hands  your 7/16" Tappet Wrench,

Feeler gauge  and the Spanner Wrenches

 that come free with each set of JOHNSON Adjustable Tappets. Stock several sets of JOHNSON Adjustable Tappets in your shop.

 You will find they are money makers  for you.

Ask Your Jobber For JOHNSON ADJUSTABLE TAPPETS



"Tappets are our business"

**JOHNSON JP PRODUCTS**  
INC.

MUSKEGON, MICHIGAN

## Prestone Reports List Price Sales

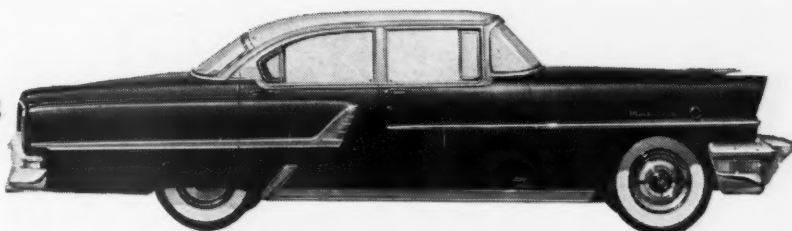
The results of a survey just completed by National Carbon Company, a Division of Union Carbide and Carbon Corporation, manufacturers of "Prestone" anti-freeze, show that of the entire quantity of "Prestone" anti-freeze sold to motorists last year, 98.3% was sold at the manufacturer's list price.

Variations from this average occurred in certain areas, but the national picture was very encouraging, according to company spokesmen. The anti-freeze product is Fair Traded in 39 states having Fair Trade laws.

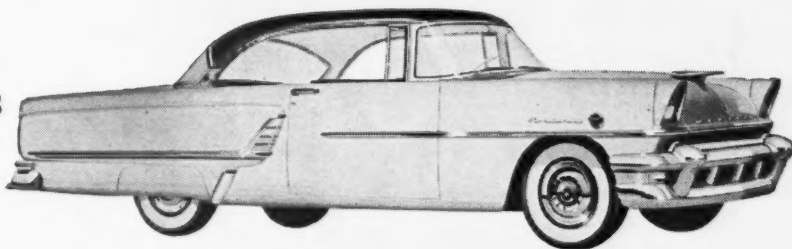
Contracts with industrial purchasers in such states provide that the product shall not be sold at less than Fair Trade prices to employee groups or others. The company does not sell "Prestone" anti-freeze to its employees or to employees of other divisions of Union Carbide and Carbon Corporation.

# 3 GREAT NEW REASONS WHY IT PAYS TO TRAVEL WITH MERCURY

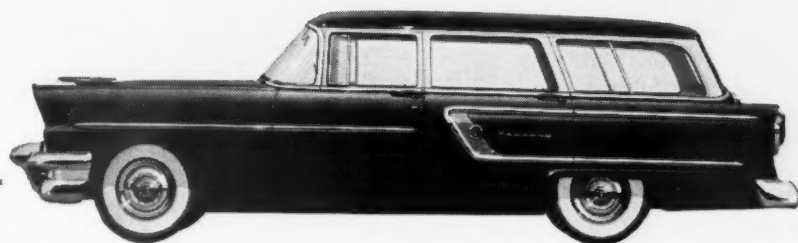
- 1** *the low-silhouette* MONTCLAIR SERIES  
Coupe, 4-door Sedan, Sun Valley, Convertible.  
Only 58½ inches high. New 198-hp V-8.



- 2** *the high-styled* MONTEREY SERIES  
Coupe, 4-door Sedan, 8-passenger Station Wagon. New 188-hp V-8 with dual exhausts.



- 3** *the super-powered* CUSTOM SERIES  
Coupe, 4-door and 2-door Sedans, all-metal Station Wagon.  
Competes with many models in the "low price" field.\*



*Mercury's new expanded line—11 new models in  
3 great series—further increases the span of  
Mercury's market. Mercury prices start below 13 models  
in the "low price" field.\**

*An expanded line and a larger market means a  
greater-than-ever dealer profit potential.*

\*Based on comparison of manufacturers' suggested list or factory retail prices

IT PAYS TO TRAVEL WITH

# MERCURY

MERCURY DIVISION, FORD MOTOR COMPANY, 6200 WEST WARREN, DETROIT 32, MICHIGAN

Chilton's MOTOR AGE, May, 1955

# HAVE YOU HEARD ABOUT RUST MASTER'S NEW

## 6 for 5 DEAL\*

**\* YOU GET SIX AND ONLY PAY  
FOR FIVE**

The Extra One is **ALL PROFIT!** Cash In On This Guaranteed  
Sure-Fire Deal! STOCK UP ON THE **BIG PRODUCTS**  
with THE **BIG PROFITS!** RIDE THE BIGGEST CONSUMER  
DEMAND EVER! Year 'round selling season! — Greater  
Customer Satisfaction! **DON'T MISS ANY PART OF THIS  
DEAL— ORDER FROM YOUR SUPPLIER RIGHT AWAY!**

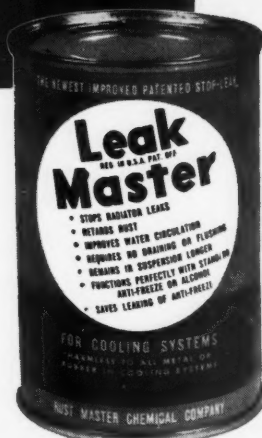
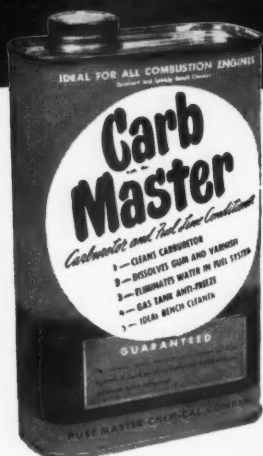
### HERE'S HOW IT WORKS . . .

When You Order 6 . . .

- |                                 |                                |
|---------------------------------|--------------------------------|
| 1) You Pay for 5 RUST MASTER —  | You Get ONE RUST MASTER FREE!  |
| 2) You Pay for 5 LEAK MASTER —  | You Get ONE LEAK MASTER FREE!  |
| 3) You Pay for 5 SLUDG-MASTER — | You Get ONE SLUDG-MASTER FREE! |
| 4) You Pay for 5 CARB MASTER —  | You Get ONE CARB MASTER FREE!  |
| 5) You Pay for 5 ASSORTED —     | You Get ONE LEAK MASTER FREE!  |

Offer Works on any Multiple of 6!

**NO FUSS  
NO MUSS  
JUST POUR  
NO MORE**



PRODUCTS WORK WHILE YOU RIDE

**Chemical Company**  
Mfg. Chemists

56 CREIGHTON ST., CAMBRIDGE, MASS.

THE SILENT PARTNERS OF MOTOR EFFICIENCY

**\*IMPORTANT: This Special 6 for 5  
Deal is good only from  
March 1, 1955 to May 31, 1955.**

Chilton's MOTOR AGE, MAY, 1955





TED ULMER (left) and H. C. Stivers of the AP Parts Corp. of Toledo chat with movie starlet Leigh Snowden at the Pacific Automotive Show. At the same show two years ago, Miss Snowden served as hostess for AP Parts.

## Bear to Balance At Indianapolis

Again this year, Bear Manufacturing Company is serving drivers and crews at the famous Indianapolis "500." Equipment was set up at the track on April 30 with a full crew on hand to start "lining 'em" up.

A 197-84 frame and alignment machine is being used as well as the 330 and 36 type balancers. The initial estimates for the month of May point at about 1500 wheels being balanced and several hundred alignment jobs performed before the winning car streaks across the finish line.



NYCAR GIRL Carolyn St. Clair plucks a winner's ring from sister NYCAR girl Donna Kime at the recent Auto Accessories Manufacturing Association show in Chicago. Girls are riding on the NYCAR merry-go-round, centerpiece of the Ellenboro Mills exhibit at the show.

## GE Co.'s New Pump Motor Submersible

A new submersible pump motor, designed to operate safely while immersed in high-octane gasoline, has been announced by the General Purpose Component Motor Department of the General Electric Company.

According to company engineers, the new motor was developed

to help solve some of the problems attendant upon the growing use of high-octane gasolines, whose extreme volatility makes standard methods of pumping hazardous, expensive, and inefficient at varying altitudes and temperatures.

The result of thousands of hours of engineering research and field testing, the new motor has been slimmed down to fit inside a three and one-half inch gasoline pipe.

\$11,000

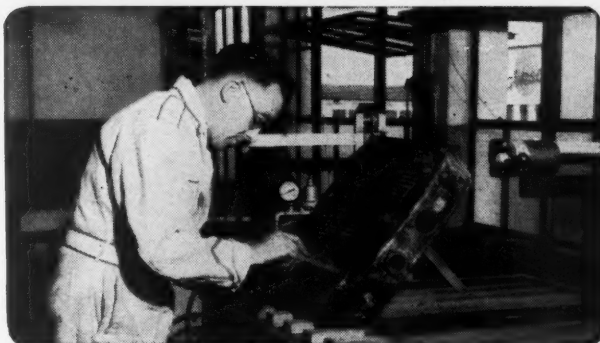
With an **INLAND RADIATOR**

**DEPARTMENT**

in *Only* **8** months—*Only* **1** man!

*Says...*

Jack Fagan of  
Jack Fagan, Inc.  
230 So. 7th St.  
Phone 1073  
Delavan,  
Wisconsin  
Population  
4007



"Our return on our investment has been excellent. It paid for itself *faster than any other equipment* we have. As for space, we utilized a former car wash stall which everyone knows can't produce that many dollars. Inland properly trained our man and when I say properly I base that on the amazing small percentage of comebacks. And, Inland trained him at *no extra charge.*"

Few automotive services offer such a potential for new and expanded business. Of the 60-million vehicles in the U.S., over 15-million require radiator service yearly. Inland-developed equipment allows operators to employ highly profitable production methods. And Inland, world's largest manufacturer of radiator repair equipment, offers the only complete package—equipment, training, merchandising.

### Why Wait?

Start by investigating this now. The most it can cost you is a few minutes of your time. And the reward can be amazing.

Fill out coupon now for your free copy of, "Blueprint For Profit." Gives details and prices of required equipment and experiences of other operators.



Inland Mfg. Co., 1108 Jackson St.  
Omaha, Nebraska

Inland Manufacturing Co. Dept. MA-5  
1108 Jackson St., Omaha 8, Nebraska

Please send free booklet "Blueprint for Profit."

FIRM \_\_\_\_\_

ADDRESS \_\_\_\_\_

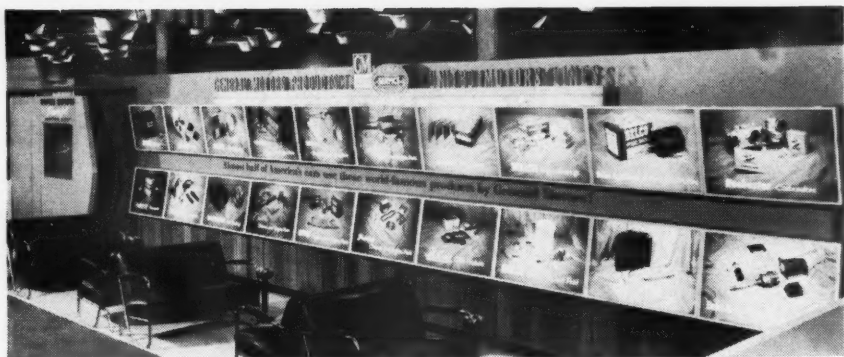
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

BY \_\_\_\_\_ TITLE \_\_\_\_\_

If Dealer, make of car sold \_\_\_\_\_

Are you now operating a radiator shop ☐ Yes ☐ No

P.S.—Mail Coupon Now. Take Advantage of New Models At Lowest Prices Ever!



Forty-foot United Motors Service "spectacular" on display at regional shows.

## UMS' Huge Panel At Atlanta Show

The United Motors Service forty-foot "spectacular" which shows UMS automotive parts lines in large, full color transparencies was on display again at the Southeast Show in Atlanta.

Before that, the colorful panel was displayed at the Pacific Automotive Show and at the Southwest Automotive Show in San Antonio. Next showing of the panel according to UMS advertising manager Duane Jones will be at the Tri-State Show in New York, May 19 to 22.

In June the "spectacular" will appear at the Great Lakes Show in Detroit.

**If you have a topnotch service manager, back him to the limit. If you haven't —get one.**

## Cadillac Reports New Sales Record

New car sales of 14,639 during the month of March brought Cadillac's sales to a total of 41,890 units for the first three months of 1955 and established a new all-time first quarter sales record, according to J. M. Roche, General Sales Manager of the Cadillac Motor Car Division.

The figure represents an increase of more than 29 per cent over the Division's best previous first quarter sales record set in 1953.

Roche, who recently completed a nationwide tour of Cadillac's key distribution points, reported that dealers shared in his strong optimism that 1955 new car sales will remain at a high level.

"In addition to record sales, balanced by an exceptionally favorable turnover of used car inventory, Cadillac continues to enjoy a substantial backlog of new car orders," said Roche.

**Voice: How do you feel this morning?**  
**Second voice: Fine.**  
**Voice: Guess I have the wrong number.**

**WOW!**

I Just saw the **NEW COLUMBUS?**

Real PROOF that **•HECO•** continues its never-ending development of newer, better, more profitable products for you to offer your customers.

**WATCH FOR THE BIG NEWS!**

next month in the JUNE issue of this magazine.

**LET'S MAKE MONEY!**

Heckethorn Manufacturing & Supply Co.  
LITTLETON, COLORADO

# Four-Door Hardtop! ... Four-Star Hit!



**OLDSMOBILE'S HOLIDAY SEDAN ...**  
the only 4-door hardtop offered in every  
price range ... is making hardtop history  
across the nation!

Hits are a habit with Oldsmobile! From coast to coast, in dealer showrooms everywhere, Oldsmobile's sensational new Holiday Sedan is getting a rousing, rocketing reception! Dealers love it! The public loves it! It's destined to score the biggest hit since Oldsmobile first pioneered the popular, pace-setting Holiday Coupé! Yes, here's a real sales-winning combination ... Holiday glamor with sedan spaciousness! What's more, only Oldsmobile offers this revolutionary new body model in every power-packed "Rocket 8" price range! No doubt about it—here's proof positive that the newest ideas come from Oldsmobile! It's another big reason why, now as always, *"It's smart to be with Olds!"*

# OLDSMOBILE

DIVISION OF GENERAL MOTORS CORPORATION • LANSING, MICHIGAN

Chilton's MOTOR AGE, MAY, 1955





**TIMED FOR SPRING**, the new Dodge Custom Royal Lancer four-door sedan is latest addition to the Dodge line. Available in any standard color, in two-tone or three-tone combinations, the new model features two outside rear vision mirrors, twin rear fender fins and has gold V-8 medallion on the rear quarter panel. (Photo left)

## Jeeps Participate In Field Maneuver

Thirty 4-wheel drive vehicles fought fires, dug post holes, plowed fields, and performed countless other operations during the mass field demonstration recently at Walnut Hills Farm, Washington, D. C.

The "Jeep-in-action" show was conducted by Willys Motors, Inc., for more than 1,500 military and civilian government procurement officers, delegates from 43 foreign countries, several hundred representatives of foreign buying missions, and Willys dealers and distributors from Eastern Seaboard states.

"The demonstration," according to S. A. Girard, Willys vice president and general manager, "was conducted to show in a practical manner the countless uses of today's Jeep 4-wheel drive vehicles."

Among the demonstrations was that of trenching equipment which, in conjunction with a Jeep welder, showed the complete operation of digging, welding and laying of pipe.



**ROADS OR RAILS**—It makes no difference to this New York Central inspection car as it travels on its route. A. E. Perlman looks over the car which is equipped with auxiliary wheels that permit it to travel on either highways or the railroad.

# NEVER BEFORE

## A Hose Clamp So Easy to Attach and Detach!

**NEW Aero-Seal  
JET!**

- Now AERO-SEAL, the finest hose clamps, have been improved with a new exclusive patented feature that permits *faster* installation and removal.

To attach, just push the housing to desired position on the band, snugly around hose, and threads of the worm screw will drop in the slots. Now tighten the worm screw to fasten securely. To remove, loosen

the worm screw; at the same time lift screwdriver head and clamp will open.

But like all AERO-SEALS, it won't budge till you want it to. Never snaps open!

Stick with the finest—at *no* extra cost! Copy-cats can't be leaders. It's **TURNOVER**, not discount, that makes profits. Ask your jobber about the new AERO-SEAL JET!

**BREEZE** *Aero-Seal* **QUICK ATTACH** **JET** *HOSE CLAMP*

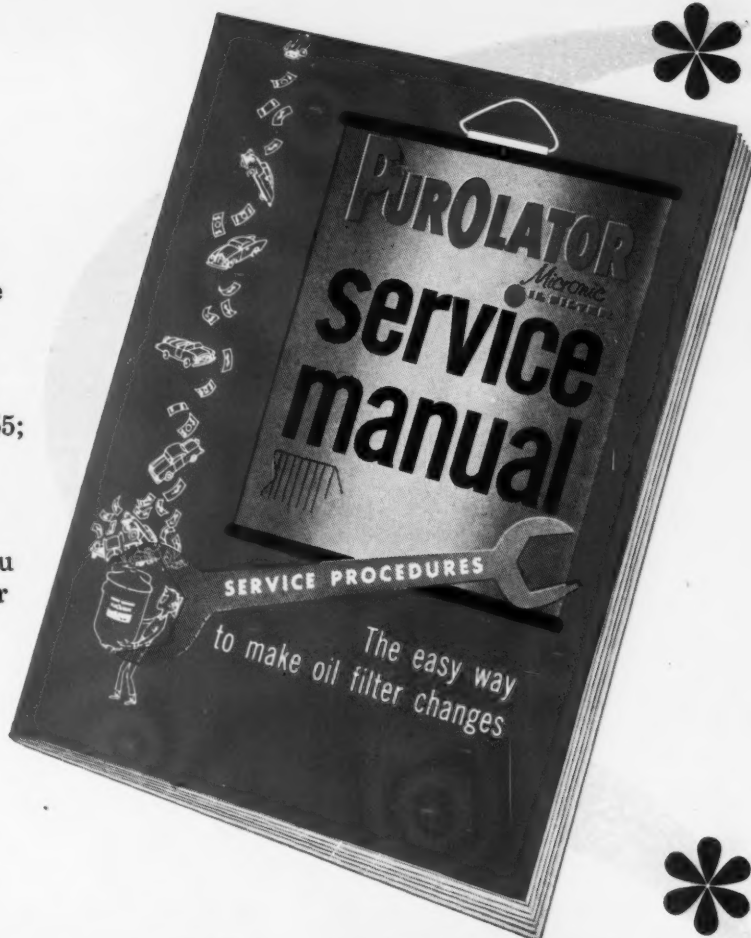
**BREEZE CORPORATIONS, INC., 700 Liberty Avenue, Union, New Jersey**

**Here it is!** Purolator's gift to the Industry! All about filter changing, written as only Purolator, the leader, could write it. 16 fact-packed pages of words, pictures and diagrams that make the job simpler, easier, **QUICKER!**

You'll find answers to questions like these: Location of filter on an Olds '49 . . . or a Dodge V-8 '53 . . . or a Ford '55; tools needed; step-by-step how-to-do-it on all cars.

You need this Purolator manual *no matter how many Purolators you sell*. You need it to save time—to make Purolator your best seller, your biggest **MONEY-MAKER** accessory.

If you haven't received your copy—ask your Purolator representative—or write Purolator.



# **BEST SELLER, 1955**

**Yes, it's a fact!** The Purolator Micronic is known everywhere as **FIRST** and **FINEST**! Specified by more makers of cars, buses and trucks than any other brand. Constantly imitated—**NEVER EQUALLED**. The industry's best **BUSINESS-BUILDER** . . . your **BEST BET FOR BETTER PROFITS!**

*Remember*

keeps customers happy . . . helps sell oil—means *more money in your pockets!*

Always stock Purolators to sell every car that calls. Costs *little* . . .



# **PurOlator**

**America's No. 1 OIL FILTER**

**PUROLATOR PRODUCTS, INC., Rahway, New Jersey and Toronto, Ontario, Canada .**

"Purolator" and "Micronic"  
Reg. U. S. Pat. Off.

*Step into THIS...*

**PROFIT PICTURE!**

**SPEED SERVICE JOBS**  
**25% to 60%**

FLAT CONTACTS HUG PAVEMENT WHEN "DOWN"  
PERMITTING FREE CROSS-TRAVEL

ACCOMMODATES ALL CARS

GREATEST ACCESSIBILITY TO  
ENTIRE UNDERCAR (CYLINDERS 39" APART)

**Mechanics like 'em!**



# GLOBE

## "Frame-Kontact"<sup>®</sup>

# HOISTS

Trade Mark Reg. U.S. Pat. Off. Globe "Frame-Kontact" Hoists are made under one or more of the following U.S. Patents: 2458986—2593630—2593635—2612344—2612355—2654443. Other U.S. and Foreign Patents pending.

# GLOBE

THE BEST LIFT

PLANTS: DES MOINES — PHILADELPHIA — LONG BEACH, CAL.

Mechanics like 'em!

LOW COST ONE-PIT INSTALLATION

CYLINDERS SYNCHRONIZED BY RUGGED,  
DEPENDABLE RACK AND PINION

FAST, ONE-VALVE CONTROL

QUICK WHEEL SPOTTING

Write for new LIFT PROFITS MANUAL explaining actual time savings now possible on each undercar job. Globe Hoist Company, East Mermaid Lane at Queen Street, Philadelphia 18, Penna.



"FRAME-KONTACT" HOISTS  
SINGLE POST



TWO POST



FREE WHEEL TYPE  
AUTO HOISTS



ROLL-ON TYPE  
AUTO HOISTS



TWO POST  
AUTO HOISTS



TWO POST  
TRUCK HOISTS



FOUR POST ELECTRIC  
AUTO HOISTS



WHEEL  
DOLLY



TRANSMISSION  
DOLLY

WORLD'S MOST COMPLETE LINE OF AUTOMOTIVE AND HEAVY-DUTY TRUCK HOISTS

## California Dealer Backs Scholarship

Bill Murphy, owner of Bill Murphy Buick, Inc., Culver City, California, is spear-heading a plan for the advancement of youth activities in the community in which he does business.

To this end, Murphy (photo) has established a perpetual college scholarship and a series of

special awards to be presented to outstanding athletes of Culver City High School.

To be known as the "Bill Murphy Sports Awards," the program will be quite unique in that nominees for the various awards will be judged not only upon the basis of their athletic ability, but also for their scholastic standing and representative conduct. An Achievement Award will be presented to the most qualified mem-

ber of the football, basketball, baseball and track teams of Culver City High School.

An additional one will be presented in the Minor Sports category, which includes tennis, swimming, etc., making a total of five such awards.



## for profitable wheel balancing

ON THE CAR . . . OR OFF  
CONTINUOUS DUTY . . .  
OR OCCASIONAL  
SPACE APLENTY . . .  
OR LIMITED

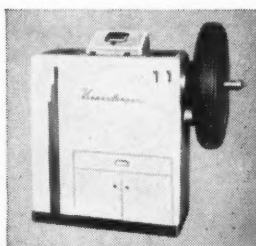
*John*  
**BEAN EQUIPMENT**

can meet your exact need at  
a price to fit your pocketbook



**John Bean On-The-Car Balancer — Model 88** — a complete wheel balancer department in itself, with convenient, easy-to-read controls — accurate, safe and extremely simple to operate — producing more profitable wheel balancing at a minimum investment.

John Bean On-The-Car Balancers are available in three basic models, The Economy, The Deluxe illustrated above, and the Twin Motor Deluxe.



**John Bean Visubalancer—Model 300** — a beam-of-light

static and dynamic balancer for fast, accurate service that eliminates labor wasting cut-and-try methods . . . puts the finger on out-of-balance wheels by showing exactly how and where to correct.



**John Bean Balancer — Model 55-J**

— combines speed with accuracy in pinpointing both static and dynamic balance . . . cuts way down on labor, resulting in greater shop profit. A rugged, low cost unit that can take continuous use.

**JOHN BEAN DIVISION**  
FOOD MACHINERY & CHEMICAL CORP.  
LANSING 4, MICHIGAN



WHEEL ALIGNERS • WHEEL BALANCERS • TIRE  
DE-SKIDDERS • STEAM CLEANERS • CAR WASHERS •  
HEADLIGHT TESTERS • ACCESSORIES and ALLIED TOOLS

JOHN BEAN DIVISION, Lansing 4, Michigan

☐ Please arrange a free demonstration for me.  
☐ Please send me information on John Bean Balancers.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



**THAT LONG WHITE LINE**, a protection when you are alert, can lull you into danger when you are drowsy, warns Shell Oil Co. By a grant to be administered by the National Safety Council, Shell is providing annual awards to women's or parents' groups contributing to traffic safety.

"When It Comes to Balancing, Use Your Bean"

# Now is the time to Change Dents into Dollars

WITH



MADE IN U.S.A. BY MINNESOTA MINING AND MFG. CO., ST. PAUL 6, MINN.—ALSO MAKERS OF "SCOTCH" BRAND PRESSURE-SENSITIVE TAPES, "SCOTCH" BRAND MAGNETIC TAPE, "UNDERSEAL" RUBBERIZED COATING, "SCOTCHLITE" REFLECTIVE SHEETING, "SAFETY-WALK" NON-SLIP SURFACING, "3M" ABRASIVES, "3M" ADHESIVES, GENERAL EXPORT; 99 PARK AVENUE, NEW YORK 16, N.Y. IN CANADA: P.O. BOX 757, LONDON, ONTARIO.

**\*NATIONAL DENTS-OUT-OF-FENDERS MONTH** comes back again—for the **FOURTH** business-sparking year! Here's the carefully-planned promotion that's proved its value to refinishing shops every year. The promotion that brings extra work into your shop—continues bringing you extra work month after month.

**YOUR CUSTOMERS** will be hearing that they can "Save Dollars During DOOF". You'll have **FREE DOOF** Business-getters telling and showing motorists the superior work your shop does. But right now is the time to make your plans for the biggest DOOF Month Promotion ever.

**FREE DOOF MATERIAL** is yours by sending the coupon below. You'll get everything you need to stage a business-boosting DOOF Month Promotion for your refinishing shop. Ask your 3M Jobber for more facts. Mail the coupon below **NOW!**

## FREE DOOF MATERIAL... Clip and Mail

Minnesota Mining and Manufacturing Co.  
900 Fauquier Ave., St. Paul 6, Minnesota

ED-55

- ☐ Please send me **FREE DOOF** Promotion Material you offer.
- ☐ Please have your salesman give me full details. I understand there's no obligation.

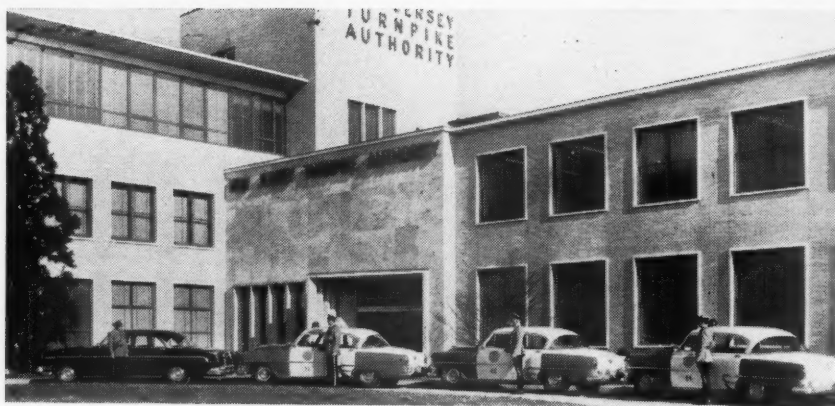
FIRM NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

SIGNED \_\_\_\_\_





**PART OF THE FLEET** of 33 Chrysler New Yorkers used by the New Jersey Turnpike Police to patrol the highway, lined up in front of Turnpike headquarters for inspection. Turnpike officials recently announced that a new safety record was set in 1954 when traffic fatalities on the road reached an all-time low of 2.47 deaths per one hundred million miles of travel. This is well below the national average of 6.2 deaths per hundred million miles. More than 24,700,000 vehicles traveled over the highway last year—rolling up a total of 929,323,912 miles of travel! The police force assigned to the road numbers 77 men, with 13 on duty at any given time during a 24-hour period.

## Select the ideal arc for each job

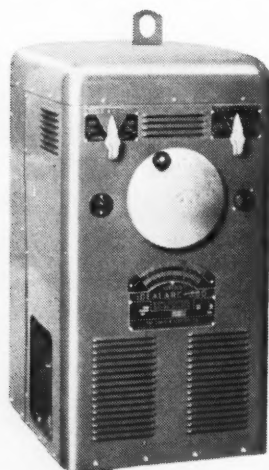


**Idealarc for Body Repairs.** Use DC and soft arc setting for smooth, spatter-free welds on body work.



**Idealarc for Heavy Work.** Use AC and forceful arc setting for strong, penetrating welds on frames.

## Welder gives both AC and DC current



### LINCOLN "Idealarc" WELDER

- One welder gives you choice of AC or DC welding current at the flick of a switch.
- Has both current and voltage controls.
- Now you can operate a DC welder on single-phase power.
- Arc-booster starting on DC as well as AC.
- Available in all sizes.
- Priced lower than plain DC welder.

GET FACTS NOW

Write for  
Bulletin  
1343

**THE LINCOLN ELECTRIC co.**  
Dept. 4003 • Cleveland 17, Ohio

*The World's Largest Manufacturer of  
Arc Welding Equipment*



**LOOK TO LINCOLN FOR LEADERSHIP**  
The World's Largest Manufacturer of Arc Welding Equipment

## Russ Riley Retires From Thompson Post

Having completed 47 years in the automotive parts industry, the last 20 with Thompson Products, Inc., Russ G. Riley has retired as special assistant to the manager of service sales for the company's Replacement Division in Cleveland.

As a sales and development engineer, Riley, 62, has toured the nation, addressing fleet, jobber and dealer groups and meetings where he is well known as a recognized automotive authority.

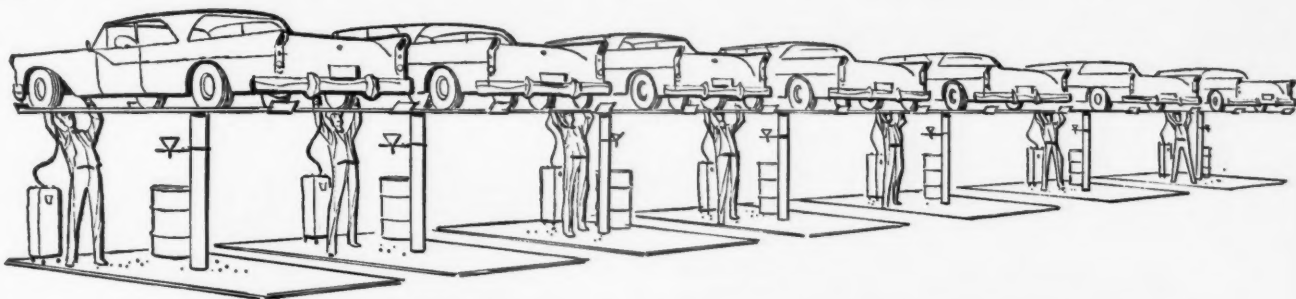
Besides heading the vocational training group of the National Standard Parts Association, Riley is a member of the technical staff of the Indianapolis Speedway, a post he has held for the last 25 years.

## Penfold Takes On VP Duties at SRI

Norman C. Penfold chairman of Southwest Research Institute's department of engines, fuels and lubricants research, has been appointed vice-president of Southwest Research Institute.

As vice-president, Penfold will continue to direct the automotive, fuels, and lubricants research and the photo laboratory at Southwest Research Institute. His special fields include internal-combustion engines, fuels and lubricants, use of engines as research tools in evaluation of fuels and lubricants.

# New Motorola® car radio installed in 20 minutes gives you more gross profit than 20 lube jobs!



There's over \$1,000 extra profit waiting for you in the car radio business this year. Just one Motorola radio sold a week will earn you that much—and every car that comes into your drive without a radio is a red-hot prospect!

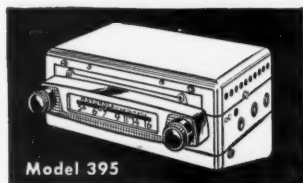
Motorola's new Model 5M car radio fits almost every car so easily that anyone can do the job with three simple hand tools and 20 minutes time. Average gross profit: over a dollar a minute! Want full details? Phone your Motorola distributor—or write us. Motorola, Inc., Chicago 51, Illinois • Toronto 4, Canada.

**Model 5M features:** 1-piece universal unit. Volumatic (no fadeout wherever there's a signal). Automatic Volume Control. 6 tubes (including rectifier). 6" x 9" in-dash Extended Tone Speaker. 6- or 12-volt electrical system. Tone control.

## Motorola

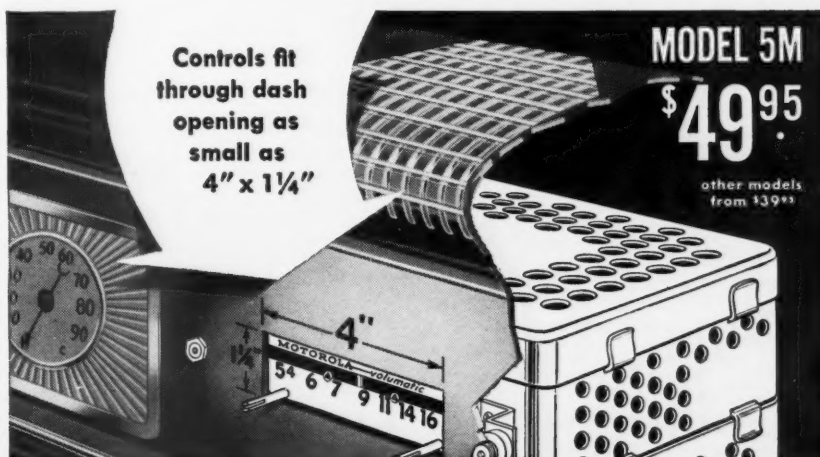
World's Largest Exclusive Electronics Manufacturer

**You'll sell even more Motorola car radios when you stock ALL models**



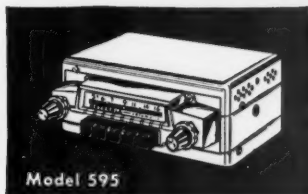
Model 395

**\$39<sup>95</sup>** Case contains speaker. Under dash or in-dash installation.



Model 555

**\$54<sup>95</sup>** Push button. Case contains speaker. Install under dash or in-dash.



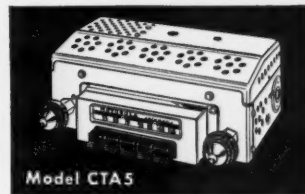
Model 595

**\$56<sup>95</sup>** Like model 555, but with in-dash 6" x 9" speaker, smaller case.



Model CTM5

**\$49<sup>95</sup>** Chevrolet custom installation. 6" x 9" in-dash speaker.



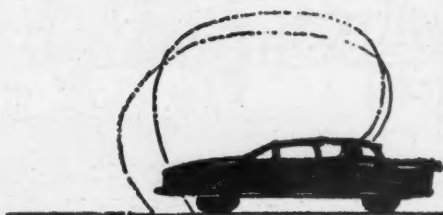
Model CTAS

**\$69<sup>95</sup>** Chevrolet custom installation. Push-button control. 6" x 9" in-dash speaker.

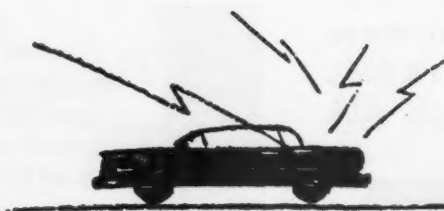
Prices subject to change without notice.



**WHEN I SEE SMOKE**



**WHEN I SMELL FUMES**



**WHEN I HEAR NOISE**

**My Horse Sense tells me...**

**A Ring Job is Needed!**



# Only with PEDRICK FORMFLEX Chrome Ring Sets...

can you do "ring jobs" again...guarantee satisfaction  
at a price your customers will pay!

Only Pedrick has the "Equalizer." And only the "Equalizer" gives a soft but positive and uniform pressure *all around the cylinder wall*. It provides a *far better seal* even in worn engines. And, thanks to the "Equalizer", oil and fuel waste are sharply cut, engine power and pick-up are restored, with a minimum of labor and parts.

In short — your customer gets a good job at an acceptable price — you get more business and profit!

Call your Pedrick jobber today...



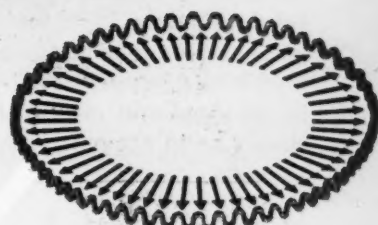
A "NEW ENGINE"  
IN EVERY BOX!



Depend on

# Pedrick

For The Right Ring Job!



Equal Pressure Everywhere...



...Means A Perfect Seal



WILKENING MANUFACTURING CO. • PHILADELPHIA 42  
In Canada: Wilkening Manufacturing Co. (Canada) Ltd., Toronto

## Highlights . . . . . Continued from Page 41

The day of the gas turbine will mark a revolution in the design of mass production machine tools. They may bear but little resemblance to the equipment now being used for the production of jet engines, primarily because of the vast difference in productivity required in the motor car field.

Meanwhile, there is a lot of life left in the high performance internal combustion engine. Many developments remain to be explored and each advance could mean a setback in the emergence of the gas turbine. For one thing, engine designers still have ahead of them the development and full utilization of solid fuel injection—something that promises gains in fuel economy, in overall efficiency, and in increased output. Solid fuel injection of gasoline is not an untried principle. The major problem has been to develop something that not only works well but can be designed and manufactured so simply as to compete in cost with

the time tried carburetor induction system. That has not been easy up to the present time.

A number of large parts makers have been working on the problem for years. And the fruits of this labor may be realized in the near future.

There is another path that merits exploration. We refer to turbocharging of engines of relatively small displacement. The idea is not novel: it was a hot topic for discussion just as the country was emerging from WWII. However, at that time no one had available the right kind of mechanism.

Judging by the work done at DeLaval and judging by the fact that a leading specialist may shortly announce a line of turbochargers based on this work, there is now something tangible to work with. We understand it is perfectly feasible to get gains in output of 100 per cent or more with a turbocharger of this kind. Moreover, it is claimed that a unique

torque curve of descending type can also be obtained. Fuel economy is said to be extremely high.

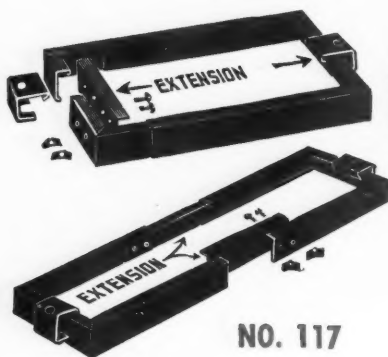
What intrigues this writer is the possibility of shifting to a small basic engine of say 100 cu-in. displacement capable of producing horsepower and torque characteristics comparable with some of the largest passenger car engines current today.

## Service Managers Of L-M at Council

Service managers from representative Lincoln-Mercury dealerships in each of the 23 sales districts attended the National Dealer Service Managers' Council of Lincoln-Mercury Division in Detroit April 18-21.

E. D. Longenecker, national service manager of L-M presided over the conference. One day was devoted to discussions with factory officials on engineering, quality control and manufacturing, and another day with sales officials.

# NOW! A BATTERY HOLD DOWN THAT FITS ALL CARS AND TRUCKS



NO. 117

### No. 117 ADJUSTABLE BATTERY HOLD DOWN

for all cars and trucks—adjustable sizes from 4" to 7½" in width, and from 9" to 19½" in length to fit any size battery. Can be adjusted to any size in a few seconds. The brackets can be placed at any bolt position on either ends or sides. Brackets clamp around frame holding battery securely. Made of heavy steel, black acid-resisting finish.

List \$1.50 each

NEW CHAMP-ITEMS FITS ANY SIZE BATTERY—LONG OR SQUARE. ONLY ONE SIZE TO STOCK TO SERVICE ALL BATTERIES



NO. 118

### No. 118 BATTERY HOLD DOWN BOLT

for 1954-55 Ford and Mercury. Furnished with wing nut and fibre washer. 9½" long.

List 35¢ each

ORDER FROM YOUR JOBBER

Write for Champ-Items catalog of more than 300 service parts.



**CHAMP-ITEMS, INC.** 6191 Maple Ave., St. Louis 14, Mo.

## "Genuine LIPE Clutch Parts cost less than imitations?"



That's right! Know what could happen if you installed a cheap inferior part in a Lipe clutch?

*"You're gonna tell me the clutch won't work. I know better."*

Oh, the clutch will work all right . . . but for how long? Let's say you've installed a pressure spring of inferior quality. One that hasn't been tested like a Lipe spring for compression weight and functional dimensions. One that isn't made of chrome silicon steel and so designed that it can't be overstressed. In a little while the spring made of poor material becomes highly overstressed and has a high fade rate. It loses its torque capacity. In no time at all you have slippage and costly damage to the pressure plate, driven disc and engine fly-wheel. Result—a crippled truck.

*"So the owner comes back for another repair job."*

You think he's going to come back to you? Uh-uh.

*"I get it. I put in a cheap part and run the risk of ruining a clutch and losing a customer. So that's why a genuine Lipe part actually costs me and the trucker less."*

Right. The truck owner pays more for a Lipe part—but he saves on future repairs and downtime. In return, you make a higher profit, eliminate complaints and build customer confidence.

*"Where can I get Genuine Lipe Clutch Parts?"*

If in a larger city, look for this ad in the yellow pages of your telephone directory under

"Clutches." Write to the factory for complete data, free service manuals and wall chart, and name of your nearest authorized jobber.

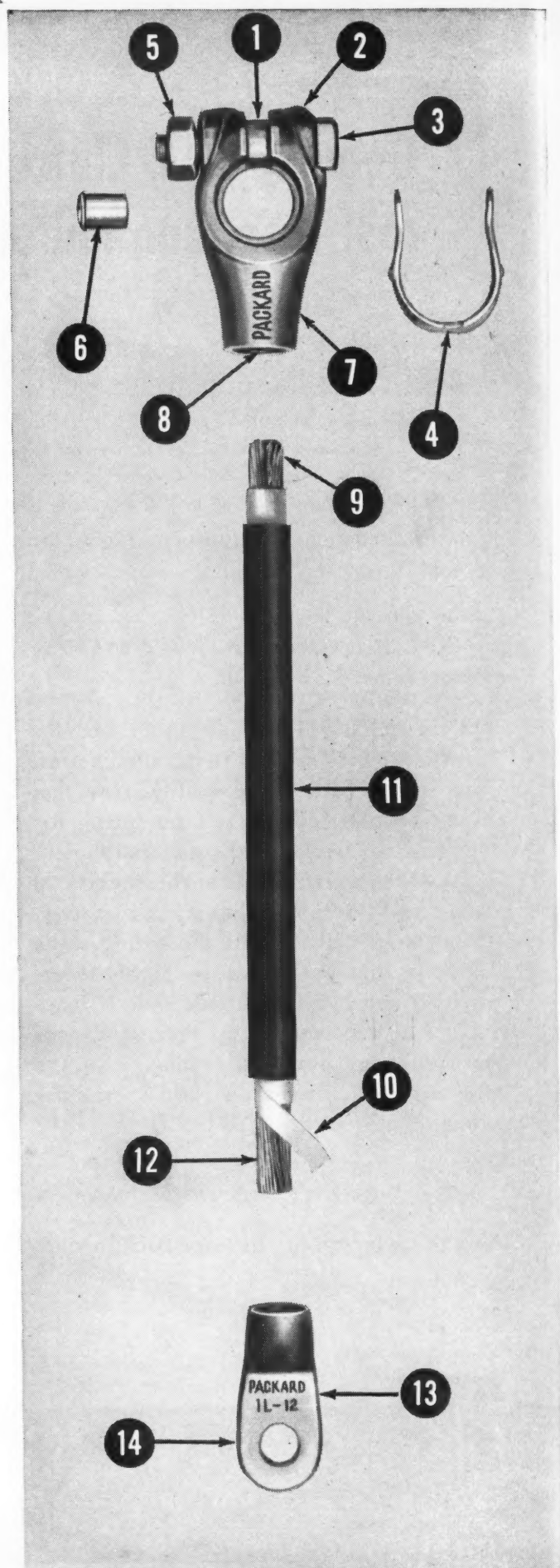


# Lipe - ROLLWAY CORPORATION

Manufacturers of Automotive Clutches and Machine Tools  
Syracuse 1, N. Y.



Look at these  
14 reasons  
why  
**PACKARD**  
Lead Alloy  
Battery Cables  
are best!

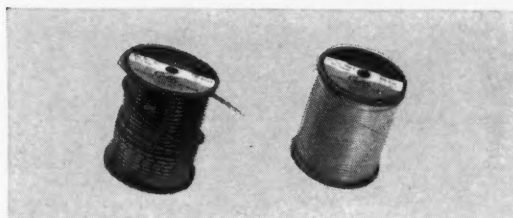


Packard LEADALLOY battery cables with Packard "809" compound insulation offer these 14 advantages:

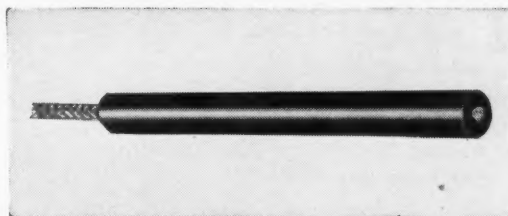
- 1 Patented compression sleeve minimizes clamp distortion and protects bolt from corrosion.
- 2 Raised shoulders give more terminal spreading leverage.
- 3 Non-porous lead-coated bolt, with extra oil coating, has greater corrosion resistance.
- 4 Solid steel insert prevents stretching, distortion, or breakage of terminal. Patented self-centering design.
- 5 Extra-thick lead-coated nut has more wrench surface for good grip.
- 6 Patented thread shield under nut prevents lead from packing into bolt threads, makes cable easy to remove from battery.
- 7 Terminals are made of lead alloy to eliminate corrosion.
- 8 Sealed-in conductor and insulation protect copper conductor from acid fumes.
- 9 Full-gauge copper conductor for adequate easy-starting current.
- 10 Paper separator for added flexibility.
- 11 Heavy insulating wall of Packard "809" compound is resistant to acid, oil, and other deteriorating agents.
- 12 Conductor extends to end of "Korelug."
- 13 Trade number stamped in "Korelug" for positive identification.
- 14 Cadmium plated copper "Korelug" attached with 50-ton press, making lug an integral part of the cable.

FOREMOST BUILDER OF AUTOMOTIVE WIRING

Sales show that Packard cable is preferred by car, truck, bus and tractor manufacturers and service men for standout performance. Build your cable business on this strong preference for Packard. Stock Packard LEADALLOY battery cables and the other members of the "BIG 3" of the cable business.



PACKARD LOW-TENSION CABLE is now available with a new insulation—Packard "404" compound—that withstands oil, heat, age and other cable-destroying conditions as no other insulation can. It strips easily and cleanly, is supplied in various colors, and costs less than other types.



PACKARD TELEVISION-RADIO SUPPRESSOR CABLE—another new product! Recommended wherever ignition interferes with radio and television reception. Also used to suppress interference in two-way communication systems, and electronics equipment used in marine, aircraft, utility, and other applications. Available in kits or factory-made sets.

A GENERAL MOTORS PRODUCT  A UNITED MOTORS LINE

DISTRIBUTED BY WHOLESALERS EVERYWHERE



**Packard**  
REG. U.S. PAT. OFF.  
TRADE MARK

Packard Electric Division, General Motors, Warren, Ohio

## Indianapolis . . . . . Continued from Page 49

And about 75 pct of the cars are Kurtis-Kraft built.

The Offenhauser engine, basically unchanged for 20 years, has been gone over with a fine tooth comb season after season to improve its performance and reliability. This year, Leo Goossen, Meyer & Drake's executive engineer, says the scavenging oil pump capacity is 15 pct

greater. And now there's a power-takeoff to drive a hydraulic pump for those cars with power steering.

The offset engine technique has certainly proved itself. About 20 entrants are using it this year. Drivers consistently report better handling of their cars on the turns and increased speed.

Every year racing fans hope to

see new engines incorporating the latest advances in racing-engine design. MOTOR AGE has information that such an engine is on the drawing boards: it's a 180 cu in. V-8, supercharged, and will be ready for 1956's grind.

A 2.5- or 3-litre engine for Indianapolis would surely spark racing fans. It would give the Classic an international flavor and make it possible for owners to run their cars on dirt tracks as well.

If Speedway officials changed the displacement rule to comply with the foreign formula, it would put U. S. racing on an equal footing with foreign racing. Also, U. S. race car designers would have a better chance to try out many new ideas. If such a rule change came along, it should be post-dated three years anyhow to give owners of today's equipment a chance to get more use out of it. Fans would certainly like to see foreign cars and drivers pitted against our boys and equipment.

It would be mighty interesting to see foreign engines in U. S.-built cars. And Indianapolis fans this year may have a preview. Bardahl Mfg. Co. is entering a Kurtis-Kraft 500-D powered with a special-design 6-cyl Ferrari engine. The Ferrari is lighter than the Offenhauser and is reported to develop over 400 hp.

Several modified stock engines are in the works. Hustling to be finished in time for the race is a 16-valve-head Studebaker engine for the Lindsay Hopkins car. Its designer is Willie Utzman who made a similar modification for J. C. Agajanian several years ago.

Dean Van Lines plans a 1955 Dodge V-8 engine for one of its two entries. In fact, there are actually three of the Dodge engines readied: one for practice in the new car, one for the qualifying runs, and one for the race itself. All three are modified to 269 cu in. Tony Capanna, who made the modifications, says he made few changes in the stock Dodge stroke, bore, and parts. He honed the cylinders 0.002 in. to increase piston clearance; reworked the water flow pattern to distribute water more evenly around the block and head; and added Hilborn fuel injection equip-

(Continued on page 158)

# MECHANIC FOR SALE

NEVER SICK—NEVER ON VACATION  
ONE MONTH'S SALARY AND  
HE'S YOURS FOR LIFE...

YOU GET ALL THIS AND MORE with an  
**OTC** HYDRAULIC PULLING SET

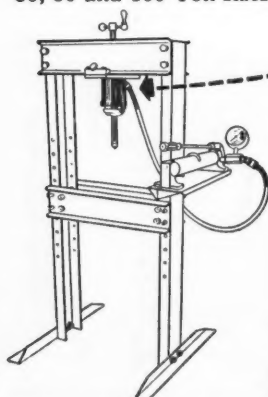
For a small amount—less than a month's salary—you can have a complete set of OTC Hydraulic Pulling Tools. It will do more than a man's work every day for life.

The famous Power-Twin Center Hole Ram may be used on a press or as a portable unit to push, pull, straighten, bend, press, spread—to pull or install bearings, sleeves, outer races, gears, pulleys, shafts, bushings, etc.

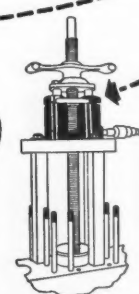
The 17½ Ton unit may be adapted to your present OTC pulling tools. Also available in 30, 50 and 100 Ton sizes.



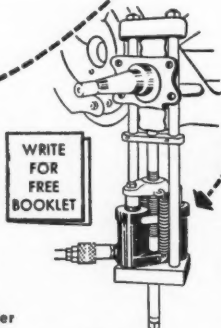
OTC 17½ Ton Ram weighs only 10 pounds, is portable and detachable



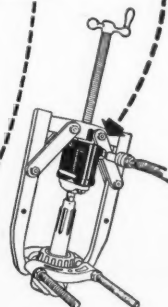
OTC 17½ Ton Ram on Portable Press for shop use.



Removing cylinder sleeve with OTC Hydraulic Ram.



Same OTC Ram removing King Pin—only one of 1,000 jobs.



OTC Hydraulic Ram and Grip-O-Matic Puller removing bearing.

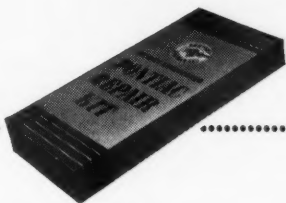
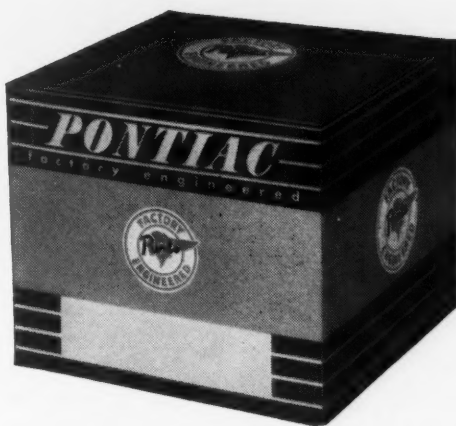
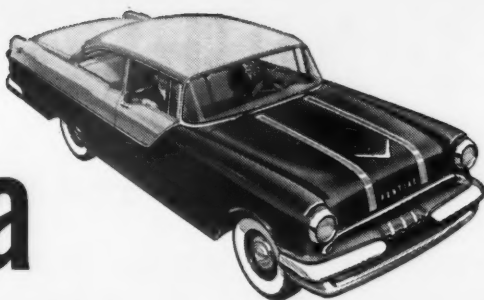
WRITE FOR FREE BOOKLET

## OWATONNA TOOL COMPANY

321 CEDAR STREET • OWATONNA, MINNESOTA



# When a Pontiac drives in, reach for a package like this!

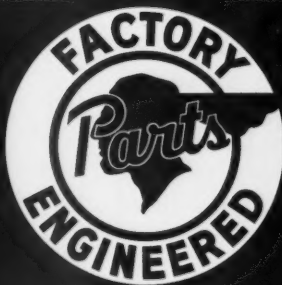


*Many Pontiac repair jobs can be taken care of with a single parts kit which includes everything necessary for the job, from major parts to nuts, bolts and washers. It's the only way to assure the owner of new-car quality—and yourself of minimum repair time, perfect fit and complete owner satisfaction.*

Pontiac owners are mighty proud of their cars because they know better than anyone else that Pontiac's outstanding reputation is built on fine performance, unsurpassed dependability and long, trouble-free life.

Capitalize on this owner loyalty by using Pontiac Factory Engineered Parts on every Pontiac repair job. See your Pontiac dealer for Pontiac Factory Engineered Parts—you'll find him especially cooperative and offering speedy service and help on tough jobs. And his prices protect your profits!

## Pontiac

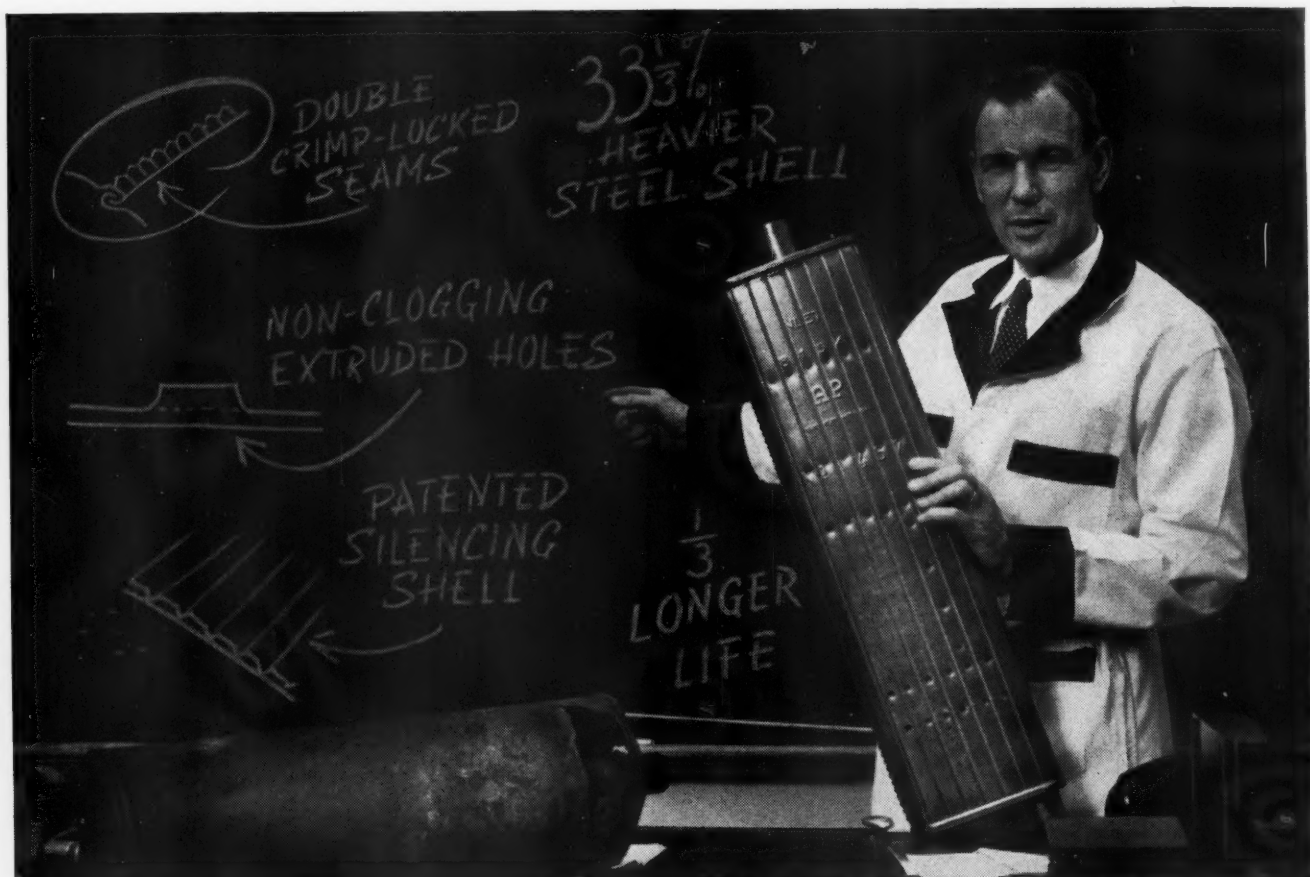


## Parts

PONTIACS  RUN BETTER ON  PONTIAC PARTS

# BUILD YOUR REPUTATION

... Give your customers those better-breathing



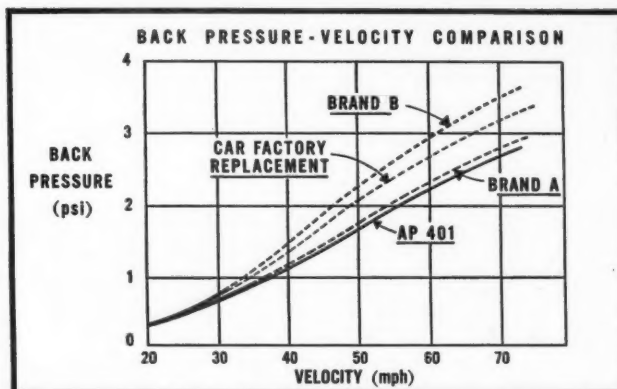
Why do a bang-up overhauling job and then install an ordinary muffler! Make it your standard practice to install an AP muffler—it will pay off in satisfied customers and the sort of reputation that *builds a business*.

The advance-design AP muffler pictured above was developed by AP engineers working in close collaboration with the leading manufacturers of high-compression engines. Back pressure has been reduced to an absolute minimum by extruded holes that practically eliminate clogging, and by large tubes and chambers capable of handling the greater, faster exhaust flow from today's high-compression engines.

With a shell of  $33\frac{1}{3}\%$  heavier steel, this new AP muffler can take almost anything you can throw at it. Double crimp-locked seams—better than welding—give positive protection against leakage, greatly lessen the carbon monoxide danger. And the patented outer shell, plus an intermediate shell, creates sound-deadening chambers that insulate against both noise and heat. Ask your jobber to show you the "Inside Story" on AP mufflers. It's an eye-opener.

## How to Become an AP Muffler Specialist:

Simply register with your AP wholesaler, carry a minimum basic stock, make it routine to look at the muffler every time a car comes into your shop.



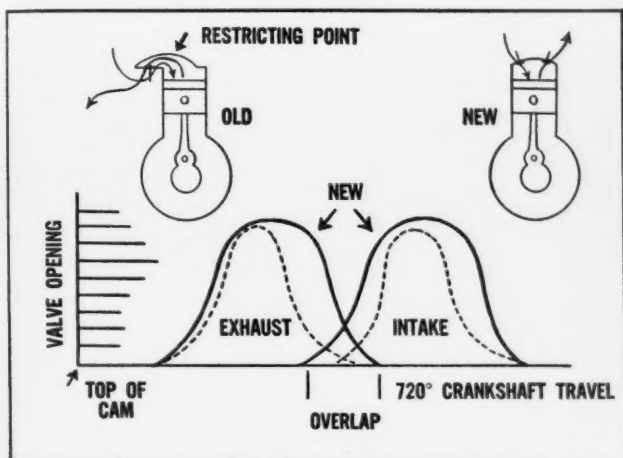
Low back-pressure in AP mufflers is clearly indicated in this chart of competitive tests with three other leading brands—one of a series that showed the AP muffler ahead every time.



BETTER-BREATHING MUFFLERS—DESIGNED FOR TODAY'S

# with AP<sup>®</sup> MUFFLER QUALITY

AP mufflers for their better-breathing engines



Comparison of old with new engine design shows how the greater valve overlap opens larger valves faster, holds them open longer, closes them faster—thus calling for a better-breathing, heavily constructed muffler such as only AP makes.



Soaked in corrosive acid like that encountered in actual operation, three leading competitive mufflers are soon eaten through. The AP muffler (extreme left) withstands this "acid test" far better than the others, lasts  $\frac{1}{3}$  longer, because of its heavier steels.

## All the sales helps you need from AP



Your initial sales package will include a poster, a post card, an inspection tag, a decalcomania, classified ads, a catalog, and price sheets. Then AP mails direct to you a constant flow of additional sales aids and up-to-date price and catalog data.



Ads like this *Post* ad will be read by hundreds of your customers and prospects. They'll look for the sign of the AP Muffler Specialist.

## HERE'S THE AP PROFITS STORY

JUST 6 SALES A WEEK FOR 50 WEEKS—\$2100

	AP Muffler	AP Pipe	Labor	Daily	Yearly
You collect	\$9.00	\$5.20	\$4.00	\$18.20	\$5460
You pay	5.80	3.40	2.00	11.20	3360
You make	\$3.20	\$1.80	\$2.00	\$ 7.00	\$2100

Based on average purchase and sale prices. Labor figured on average flat rate, split 50-50 with help

**THE AP PARTS CORPORATION**  
3-R AP Building, Toledo 1, Ohio  
Mufflers and Pipes • Miracle Power • dgf 123

**BETTER-BREATHING ENGINES**

Chilton's MOTOR AGE, MAY, 1955

THIS FREE SIGN IDENTIFIES YOU





## Indianapolis . . . . . Continued from Page 154

ment instead of carburetors.

Connecting rods, bearings and crankshaft are all stock parts, and the engine planned for the qualifying runs may even use stock pistons. The car has Offenhauser flywheel, clutch, and transmission.

Mr. Capanna says the engine used for practice has done 184 mph on a coupe at Bonneville. The qual-

ifying engine is designed to use a greater amount of fuel (probably nitro-methane) than the engine for the race itself.

The engine weighs about 30 lb to 40 lb more than the average Offenhauser installation. It's expected to operate at 5500-7500 rpm, developing 310 hp at 7000 rpm.

Frank Kurtis has something

radically new for this year's race—a streamliner that could start a new trend in race body designing. Kurtis-Kraft, Inc., Los Angeles, built a car that looks like a miniature of the huge cars which have set world records over the measured-mile course on the Utah Salt Flats in recent years. And it has a fared wheel design, believed the first ever prepared for Indianapolis.

Here are some features of the car, the Sumar Special, built for Chapman Root, Terre Haute, Indiana, which Jimmy Daywalt will drive. It's 3 in. lower in the frontal area than the familiar Kurtis models and weighs 1946 lb dry. Wheelbase is 96.5 in. All four tires are fared in. There's a tail fin that extends to 39 in. above the ground. A Plexiglas cockpit canopy will be used only in qualifying. Sides of the body are left open at the wheels for quick wheel changes. Openings and air scoops in front and side panels give better air distribution for cooling brakes and tires. The exhaust manifold is recessed in the top of the main body cowl and extends alongside the cockpit to the rear fin.

Chassis is basically the Kurtis 500-D, incorporating the conventional welded steel tubing frame. It has a superstructure for attachment of firewalls, insulation, and body panels. The firewalls were louvred to improve engine ventilation. An air scoop on top of the body leads to the cockpit for cooling. Scoops on each side are for tire cooling.

Because of the fared wheel design each rear fender faring has a "window" installation so that the driver can keep check on tire condition. A small removable panel in line with the driver's vision permits front tire checking.

Power plant in the car is a 4-cyl 270 cu in. Offenhauser engine. Injection-type fuel supply is supplemented by mild pressuring ahead of the fuel injectors through the use of an air scoop in the hood.

Another streamliner built for this year's race is the Belond-Miracle Power Special. Its body shell is as wide as the wheels to guide wind streams around the wheels and reduce drag to a minimum. Quinn Epperly designed the body

### TO PAR AIR COMPRESSOR OWNERS



## Kellogg assures a continued source for Par compressor service parts

Lynch Corporation has discontinued making Par compressors. Kellogg, manufacturers of the famous Kellogg-American line of air compressors, is now ready to supply service parts for Par compressors.

To assure Par jobbers and owners of a continued source for service parts, Kellogg has stocked the complete Par service parts inventory. Thus, your present Par compressor investment is protected by a first line, reputable company, backed by years of experience in the air compressor field.

And, when a new compressor is needed, see your Kellogg jobber's complete line of Kellogg-American air compressors, outstanding in efficiency and service life.

**KELLOGG DIVISION**  
ROCHESTER 9, N. Y.

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COMPANY

## Kellogg-American

1/2-20 H.P. AIR COMPRESSORS

and Jim Rathmann will drive the car.

The chassis is a Kurtis unit, re-designed to accommodate the streamlined body. Framework is steel channel and tubing in sizes from 3/4-in. to 1 1/2-in. The car's dimensions are 15 ft long, 5 ft wide, and 44 in. high. Its lowest point is 4 in. above ground.

The body shell is 14-ga sheet aluminum. Dzus fasteners attach the eleven separate panels to the chassis framework. The builders used reverse order in putting the car together. They mounted the engine, transmission, rear end, fuel and oil tanks on the frame before they attached the body so that the mechanics could quickly remove the shell for running gear inspection.

Dry weight is about 1935 lb. The tail portion behind the driver will mount a 61-gal steel gas tank. A Fiberglas material will coat the outside to increase its strength.

The car's equipment includes a 270 cu in. Offenhauser engine, Hilborn fuel injection system, Hunt magneto, Halibrand quick-change rear end and spot brakes, and Monroe telescope-type and Houdaille vane-type shock absorbers on each wheel.

The entire exhaust system is inside the body shell. New type exhaust headers and tail pipe designed by Southern California Muffler Corp. should, they hope, broaden exhaust fume dissipation and equalize distribution in manifold-ing.

An innovation is the two-way radio for driver-to-pit contact. It should keep the driver up-to-the-minute on race developments and let him tip off the pit crew before he plans a stop. The set is in the cowl just behind the driver's headrest. The aircraft-type helmet has earphones and the driver wears a throat microphone.

There's a determined effort to get a Ferrari engine into the competition. A Kurtis-Kraft 500-D chassis was flown to Scuderia the Ferrari plant in Modena, Italy, for installation of a 6-cyl Ferrari engine. The completed car, along with spare engine, will then be air-freighted back to Indianapolis in time for the qualifying trials. Alberto Ascari has the inside track as the pilot. Bardahl Oil Co. of

Washington, Inc., Seattle, are the sponsors. Based on their 1952 experience at Indianapolis, Ferrari and chief design engineer Lampredi developed the two engines.

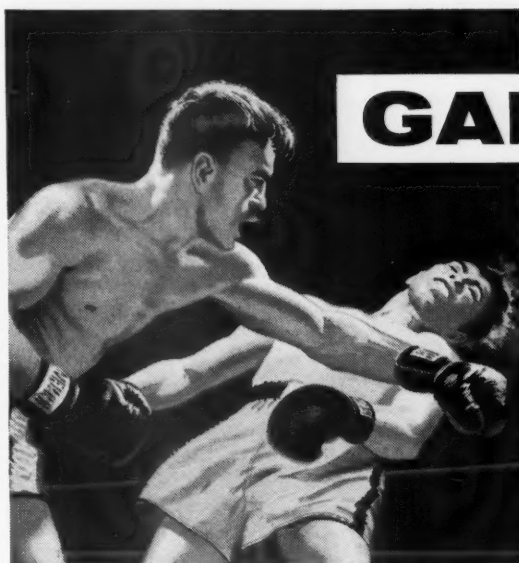
A standard Meyer & Drake transmission unit was flown to Italy last month. The completed power package is now undergoing test stand running. The car will run on 18-in. wheels.

A new roadster-type racer, built by Eddie Kuzma for Dean Van

Lines, will have 1954 AAA champion Jimmy Bryan as driver. The car, of tubular frame construction, has a Meyer & Drake 270 cu in. engine.

Interesting design feature is a split tail section to permit easier and faster maintenance. Instead of the customary single shell construction, this tail section has upper and lower halves that work somewhat like giant clamshells.

(Continued on page 162)



# GABRIEL

**packs the  
wallop  
that wins!**

more customers, more sales, more profits with . . .

## the only complete line of SHOCK ABSORBERS

**GABRIEL'S FAMOUS HYDROSHOX** . . . the standard equipment line . . . universally preferred for smooth driving under average road conditions.

**GABRIEL'S NEW AJUSTOMATIC** . . . unique three-point adjustability provides a maximum coverage with a minimum number of units.

**GABRIEL'S SILVER "E"** . . . the largest of all shocks for passenger cars . . . masters the toughest going where roads are the roughest.

AND . . . All with Gabriel's Exclusive Patented O-RING design.

AND . . . Backed by a NEW hard hitting advertising and promotion program to create more and more shock selling opportunities.

As advertised in

The Saturday Evening  
**POST**

**Collier's**

ride with **GABRIEL** . . .

the greatest name in **RIDE CONTROL**

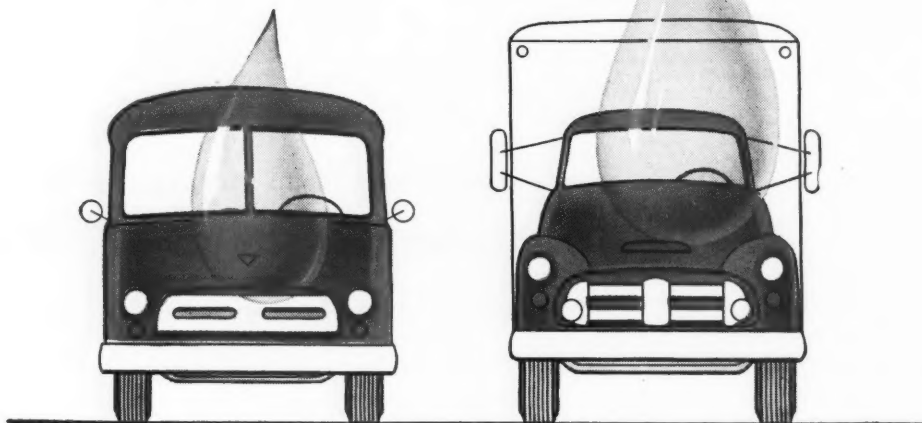
**THE GABRIEL CO • CLEVELAND 15, OHIO**



Makes Every

HEAVY-DUTY

# DELCO SUPER 11 Brake Fluid



Gives Maximum

Under the most rugged operating conditions, every stop is surer when Delco Super 11 heavy-duty brake fluid is used in the brake systems of cars, trucks or buses.

There's a big pre-sold market for Delco Super 11, too—it's original equipment on many vehicles, including all General Motors cars and trucks.

Delco Super 11 exceeds SAE specification 70R1, which establishes performance standards for heavy-duty brake fluid, including

A GENERAL MOTORS PRODUCT   A UNITED MOTORS LINE

DISTRIBUTED BY WHOLESALERS EVERYWHERE





# Stop Surer!



## Braking Power

operating temperature ranges . . . lubrication . . . stability . . . corrosive effect on metals and rubber. Delco Super 11 brake fluid also exceeds U. S. government specification VV-F-451a. Delco Super 9—the moderate-duty brake fluid—exceeds SAE specification 70R2.

Both Super 11 and Super 9 are available in any convenient quantity—from 8-ounce cans to 54-gallon drums. Order from your United Motors distributor.

**moraine  
products**

### DELCO LINED BRAKE SHOES



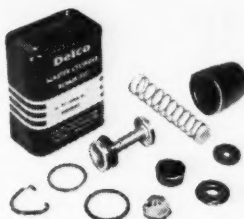
Delco brake shoes and lining are best for replacement because they're made to original equipment standards.

### WHEEL CYLINDER REPAIR KIT



Contains all parts needed to restore a wheel cylinder to best possible operating condition.

### MASTER CYLINDER REPAIR KIT



Contains every part necessary to put a master cylinder back in normal operating condition.

**DELCO** Makes  
Brake-Repair  
Easy!



SPRAYS A CLEAR, PROTECTIVE COATING INSTANTLY THAT

**INSULATES**  
**WATERPROOFS...**

- Ignition and Spark Plugs
- Battery Cables and Wiring
- Metal Trim and Accessories

also ideal for TV-RADIO antennas, parts and wiring . . . protects woodwork, blueprints, etc.

A real timesaver for your own shop work—a proven money-maker as an add-on sales item—Champion Sprayon Plastic Sealer with crystal clear acrylic base serves countless uses in the automotive trade. Sprayon Plastic Sealer is high in dielectric strength—sprays on any surface—dries quickly to a non-tarnishing, flexible finish. Insulates ignition and wiring against short circuits and damaging corrosion . . . protects inside and outside chrome trim and accessories.

Available in handy 12-oz. aerosol can with patented non-clogging nozzle that takes only fingertip pressure for instant and sure application. This tool kit size container is popular with mechanics for on-the-job portability. Plastic Sealer also available in bulk with special Plastic Reducer.



**NEW Display Material**

Eye-catching, compact counter displays for your dealers. Ask about Champion Deal #500.

Champion also makes the complete line of 38 Sprayon automotive Enamels—also Aluminum, White and Black Lacquers that are gasoline and oil resistant—Zinc Chromate Primer to prepare metal for quick, easy touchup. See your jobber or write direct.

REPS—Some territories still available.

**Champion Bronze Powder & Paint Co., Inc.**

2101-2121 N. Elston Ave., Dept. MOTO, Chicago 14, Ill.

## Indianapolis . . .

Continued from Page 159

The exhaust system follows a design trend seen on several cars this year. Exhaust is lead out at the bottom alongside the car.

Designer of the Dean car rounded out body panels for better reduction of air drag. The streamlining effort is just short of the radical design changes of the Kurtis-built Sumar car, and the Belond streamliner.

Old faithful, never-say-die Novi, powered by a 183-cu-in. 8-cyl supercharged engine, is ready to go once more. Still regarded one of the most powerful cars at Indianapolis, its fortunes will be entrusted to youthful 1952 winner Troy Ruttman.

This year, chief mechanic Jean Marcenac's only changes are use of spot-type brakes and magnesium wheels. The 20-in. diam wheels are specially made for the Novi by Halibrand Engineering Co. They're one-section cast magnesium and have no ribs. Walls are 5/16-in. with slight 3/16-in. taper. Prototype wheel weighed 22½ lb. Design is rudge-type, serrated, with conventional wing nut.

Eight entrants have the necessary attaching brackets to permit use of the Monroe Auto Equipment Company's power steering equip-

(Continued on page 163)

for **FRAME REPAIRS** it's

**TRU-WAY**

FRAME ALIGNING GAUGES  
FRAME SPECIFICATION MANUALS

1946-1953 Complete FRAME MANUAL . . . \$29.00  
1954 FRAME MANUAL \$6.00  
1955 FRAME MANUAL \$6.00  
Send for Literature on TRU-WAY Frame Aligning Gauges

**NEW ADDRESS**  
Box 5736 Columbus 21, Ohio

**TRU-WAY CO.**

**ORDER NOW**

**Lasco**

**MOUNTAIN MASTER**

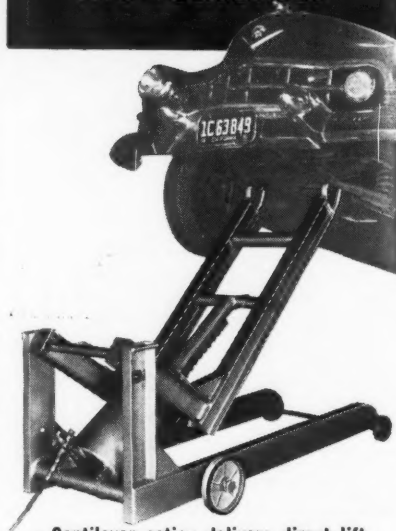
**BRAKE LINING**

*America's Finest!*

SINCE 1908  
See this ad in a 1000 places

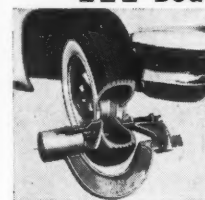
From Hollywood to Manhattan—Demanded by Fine Car, Bus and Heavy Transportation Owners. Get the BEST for a Few Cents More. Cut Costs—Prevent Accidents—Save Lives! Dealer inquiries are invited. Write or wire. LASCO BRAKE PRODUCTS CORP. MEMPHIS 3, TENN. OAKLAND 7, CALIF.

**LEE...**  
the one  
**END LIFT**  
with **ALL**  
the features!



- Cantilever action delivers direct lifting power
- Double orifice valve eliminates surging
- Large Neoprene tires, roller bearing wheels for easier handling
- Pat. safety latch for positive locking
- Stores on end in minimum space

### LEE Bead Breaker



Breaks both beads in one operation, with wheel on car, ground or tire changer. Air power does the work.

### LEE Tire Remover

Removes tire without demounting wheel . . . ideal for tubeless tires . . . handles all U.S. tires on any type wheel . . . air power does all the work.



Write for Bulletin 201



**AUTOMOTIVE EQUIPMENT MFG. CO.**

11000 SO. ALAMEDA STREET  
LYNWOOD, CALIFORNIA

Chilton's MOTOR AGE, MAY, 1955

## Indianapolis . . . . . Continued from Page 162

ment. Five new Kurtis-Kraft-built cars are designed for power steering units: Ansted Rotary Engineering Special, Zink Special, Anderson Special, Sumar Streamliner, and Belanger Special. The Crawford Special, Jones and Maley Special, and Chapman Special also have the necessary bracket mountings.

Several new developments in wheels and brakes come from Halibrand Engineering Co., Culver City, Calif. Last year's 18-in. cast magnesium wheel has a three-eared forged wing nut this year. The forged part, formerly a casting, is claimed to be stronger and lighter, providing a total weight-saving of about two pounds for all four wheels.

The 18-lb wheel itself is improved over last year's model by addition of a pressure plate, integrally cast with the wheel. This plate assists in guiding the wheel onto the driving pins. It's expected to speed up each wheel change by two or three seconds. The casting was lightened by design changes in wall thicknesses to compensate for weight added by inclusion of the pressure plate.

An entirely new 16-in. model wheel of cast magnesium is also available this year. It's designed principally for front wheel use at the Speedway. Rim, wall section, and pressure plate are cast in one unit. The wheel weighs 13½ lb, probably the lightest magnesium wheel of this size developed for Indianapolis use. Wall sections are more dished in shape than other models. This provides a greater sectional modulus and eliminates heavy rib-type wall sections, according to designer Ted Halibrand. Walls are vented for better air cooling of tires as well as brakes.

It's likely there will not be a single wire-wheeled car in the race this year, so the trend away from them will be complete.

There's a modification in the dual-spot aircraft-type brakes introduced by Halibrand last year. Redesigned mounting brackets use sliding pins, eliminating the shackles. This change is expected to give the brake greater stability

and efficiency by maintaining proper alignment at all times.

Firestone Tire & Rubber Co. has two completely new series of tires for this year's race. Redesigned and engineered front and rear, tires are claimed to be safer, better balanced, longer wearing, and make for improved handling.

Both front and rear tires have

a slightly narrower and thicker tread. Firestone reports an improved 6-ply Nylon cord body locks the cords and gives them a fixed "set," preventing tread chunking and separation.

The front tires have two circumferential grooves instead of the three previously used to give more traction in the turns.

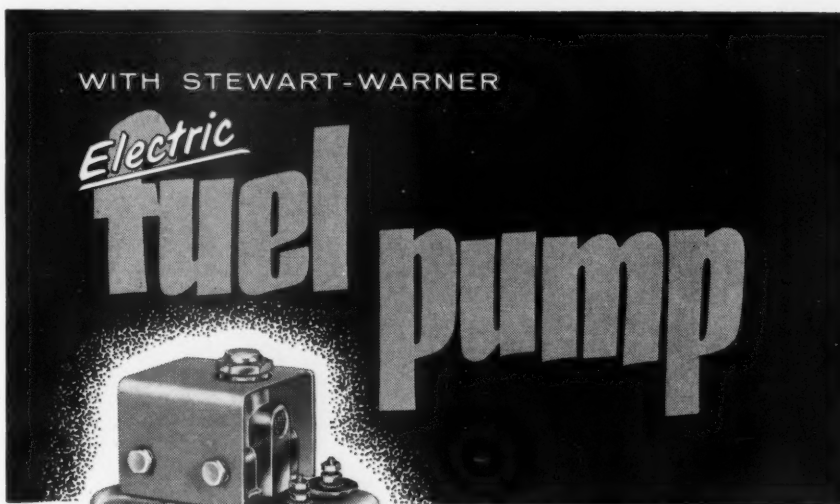
The Engineering of the ribs also provides a quick visual check of wear during the race.

show 'em how you

stop

*Vapor lock*

...for good!



- for faster starts,  
winter and summer
- for positive gas-flow . . . always!

Here's the way to sell your customers real insurance against balky starting, frequent stalling due to "vapor lock." Sell them on the reliability, the sure response of the Stewart-Warner Electric Fuel Pump. Assures engine a *positive* fuel supply at all times. The result is faster starts, dependable performance, all through the year.

The minute the ignition switch is turned on, gas is fed to the engine. That's because the Stewart-Warner

Electric Fuel Pump operates independently of the engine, works only as needed, eliminates battery grind. Stalling is a thing of the past.

Heavy duty construction, sealed against rain and road-splash, protected under all conditions. Installation is simple on any truck, bus or car. And you make big profits on each unit, *plus* the installation charges. Order now from your Stewart-Warner jobber. Cash in on this wide-demand, easy-to-sell fuel pump!

## STEWART-WARNER

Instrument Division, Dept. FF-55, 1840 Diversey Parkway, Chicago 14, Illinois



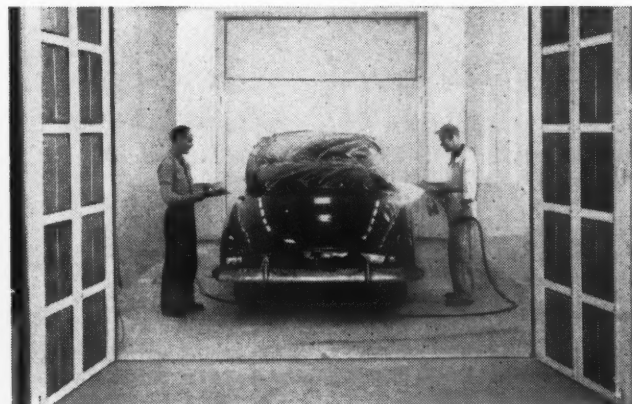
# DeVilbiss boosts Jackson Chevrolet paint shop sales to \$60,000 a year



**1.** Jackson Chevrolet Company, Pueblo, Colorado, is enjoying a big increase in body-shop business—thanks to their new DeVilbiss Spray Booth, Infra-red Baking Oven, Spray Guns and Transformers. Faster production upped sales volume from \$36,000 to \$60,000 a year.



**2.** Now, Jackson Chevrolet can turn out 4 and 5 complete paint jobs a day; average 250 touch-up jobs a month! New DeVilbiss units have speeded up their entire operation and will enable the painters to handle even more work as business continues to grow.



**3.** Better finishes—Jackson painter sprays a smooth, full-covering coat with a DeVilbiss JGA. He prefers this precision-balanced gun, because it sprays a uniform pattern, requires fewer passes, is easier to handle and adjust. DeVilbiss' scientific lighting illuminates without glare or shadows.



**4.** No delays—DeVilbiss Infra-red Baking Oven speeds jobs to completion. Enamels dry in 30 minutes or less; lacquer 5 to 10 minutes. DeVilbiss also offers low-cost infra-red baking panels. Ideal for small jobs—fenders, body panels, hood, deck lid, front and rear end.

This is a typical story of the way DeVilbiss spray equipment helps speed up refinishing operations . . . how it enables spray painters particularly, to have better working conditions. Why not modernize your shop with DeVilbiss spray equipment! For complete information on spray guns, compressors, booths, transformers, ovens, hose and connections, call your DeVilbiss jobber. His business is to make your job easier, faster and more profitable!

**THE DEVILBISS COMPANY**  
Toledo 1, Ohio

Santa Clara, California • Barrie, Ontario • London, England

BRANCH OFFICES AND DISTRIBUTORS IN PRINCIPAL CITIES THROUGHOUT  
THE UNITED STATES, CANADA AND THE WORLD



## Calendar of Coming Events

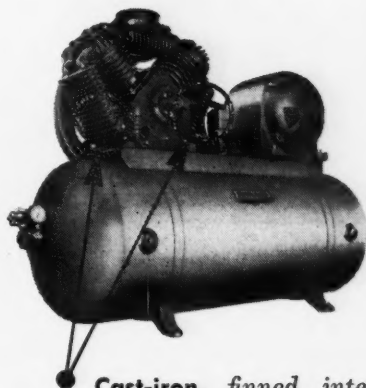
### Dealers Conventions

May 21-23—South Carolina Automobile Dealers Assn., Ocean Forest Hotel, Myrtle Beach, So. Carolina.  
May 23-24—Idaho Automobile Dealers Assn., Boise Hotel, Boise, Idaho.  
May 26-28—Washington State Automobile Dealers Assn., Benjamin Franklin Hotel, Seattle, Washington.  
June 19-21—Michigan Automobile Dealers Assn., Grand Hotel, Mackinac Island, Michigan.  
Aug. 21-23—22nd Annual Convention, Automobile Dealers Assn. of West Virginia, Greenbrier Hotel, White Sulphur Springs, West Virginia.  
Aug. 28-30—Kentucky Automobile Dealers Assn., Kenlake Hotel, Hardin, Ky.  
Sept. 9-11—Maine Automobile Dealers Association, Samoset Hotel, Rockland, Maine.  
Sept. 16—Nebraska New Car Dealers Association, Paxton Hotel, Omaha.  
Sept. 16—24th Annual State Convention, Kansas Motor Car Dealers Assn., Broadview Hotel, Wichita, Kansas.  
Sept. 16-17—New Mexico Automotive Dealers Assn., Nickson Hotel, Roswell, N. M.  
Sept. 18-19—South Dakota Automobile Dealers Assn., Sioux Falls, S. D.  
Sept. 18-20—32nd Annual Convention, New York State Automobile Dealers, Inc., Saranac Inn, Saranac, N. Y.

Sept. 19—Minnesota Automobile Dealers Association, Radisson Hotel, Minneapolis.  
Sept. 19-20—Illinois Automotive Trade Assn., Pere Marquette Hotel, Peoria, Ill.  
Sept. 19-20—Wisconsin Automotive Trades Assn., Schroeder Hotel, Milwaukee, Wisc.  
Sept. 25-27—Texas Automotive Dealers Assn., Shamrock Hotel, Houston, Texas.  
Sept. 25-27—Tennessee Automotive Assn., Buena Vista Hotel, Biloxi, Miss.  
Sept. 26-27—Pennsylvania Automotive Assn., William Penn Hotel, Pittsburgh, Pa.  
Sept. 26-27—Automobile Dirs. Assn. of North Dakota, Fargo, North Dakota.  
Sept. 28-30—37th Annual Convention, New Jersey Automotive Trade Assn., Hotel Chalfonte-Haddon Hall, Atlantic City, N. J.  
Oct. 9-10—Georgia Automobile Dealers Assn., Bon Air Hotel, Augusta, Ga.  
Oct. 9-10—New Hampshire Automobile Dealers, Mt. Washington Hotel, Bretton Woods, New Hampshire.  
Oct. 9-11—Mississippi Automobile Dealers Assn., Buena Vista Hotel, Biloxi, Miss.  
Oct. 16-17—Oklahoma Automobile Dealers Assn., Mayo Hotel, Tulsa, Oklahoma.

(Continued on page 166)

## Cut Compressed Air Costs!



**Cast-iron, finned inter-coolers on DeVilbiss compressor outfits lower the air temperature between the first and second compression stages, and provide extra cooling. Result: much higher efficiency and greater air output.**

The biggest cost in compressed air is the operating cost. DeVilbiss air compressors save on power, upkeep and depreciation. By actual tests, DeVilbiss compressors deliver 22.6% more air per power dollar than most other compressors. Many times, they pay for themselves on power savings alone.

In addition to inter-coolers, every DeVilbiss compressor includes these features: automatic pressure switch, A. S. M. E.-approved tank, check valve manifold, diamond-bored pistons, cylinder head with removable valves, quality electric motor or gas engine.

Contact your local DeVilbiss jobber for a complete analysis of your compressed air needs.

**THE DEVILBISS COMPANY**  
Toledo, Ohio

Santa Clara, Calif. • Barrie, Ontario  
London, England

Branch Offices in Principal Cities

FOR BETTER SERVICE, BUY

**DEVILBISS**



THINGS YOU CAN DO  
FASTER-EASIER with

**BAY-LIFT**

for engine  
work on today's  
wide-fender cars  
simply raise rear  
end with  
BAY-LIFT and go  
to work



**BAY-LIFT**

- Portable, pneumatic, one-end lift
- Raises either end of car, 0" to 50" in 10 sec.
- Holds at any convenient working ht.
- Goes anywhere an air hose will reach
- Rugged, dependable, service-free
- Doesn't extend beyond car, stores in 27" sq.
- Double safety lock, exclusive 4-way suspension

**WIN \$5**—Tell us how you use BAY-LIFT! We'll pay \$5 for any idea used in our future advertising. Entries become property of Bay. Judges' decision final. Offer ends Dec. 30, 1955.

**BAY BUMPER JACK**  
AIR OPERATED...

drops wheels clear of deep rear fenders  
Hinged-type (54" lifting bar, closes to 24" wide for between-car maneuverability) ... Standard-type.  
Priced from \$99.95



**BAY MANUFACTURING CO.**

Dept. MA, Box 608, Harbor City, Calif.  
Warehouses: Boston & Philadelphia  
OVERSEAS DIV.: 276 W. 43rd St.  
New York 36, N.Y.

ASK YOUR JOBBER FOR  
FREE BAY DEMONSTRATION

"I've quit searching  
for tools since  
I've had my

**HUOT  
TULDEX"**

... says Henry Rigelhof,  
Assistant Service Manager  
for Whitcomb  
and Blick,  
Minneapolis'  
oldest  
Pontiac  
dealer.



"The pull-out feature sure beats drawers for storing tools. They're always orderly and at finger-tip reach," according to this practical mechanic.

Since its introduction, the Tuldex has become the hottest item in the tool chest line. An entirely new idea for protecting and locating tools, it puts the master mechanic on a professional basis.

Six tool holding panels, 12" x 18", swing out on separate tracks. Holes drilled in the pegboard hang each tool on its separate mounting. There are more than 24 square feet of storage—twice as much as the average tool chest!

The heavy steel cabinet is fitted with top and bottom locks and the big drawer is just the right size for power tools. 29" x 26" x 13 3/4" overall.

Inquire from your jobber, or write  
for descriptive circular.

**HUOT**

Pronounce  
it "Hew-ot"

**HUOT MANUFACTURING CO.**

585 No. Wheeler St.  
St. Paul 4, Minn.

## Calendar . . .

Continued from Page 165

- Oct. 16-18—National Used Car Dealers Association, Hotel William Penn, Pittsburgh, Pa.  
Oct. 23-25—Florida Automobile Dealers Assn., San Souci Hotel, Miami Beach, Florida.  
Oct. 26-28—Arkansas Automobile Dealers Assn., Moror Hotel, Little Rock, Arkansas.  
Nov. 1—Connecticut Automotive Trades Assn., 34th Annual Convention, Hotel Statler, Hartford, Conn.  
Nov. 6-8—Automotive Trade Assn. of Virginia, Roanoke Hotel, Roanoke, Virginia.  
Nov. 13-14—Ohio Automobile Dealers Assn., Netherland Plaza, Cincinnati, Ohio.  
Nov. 13-15—20th Annual Convention, Auto Dealers Assn. of Alabama, Tutwiler Hotel, Birmingham, Ala.  
Dec. 7—Utah Automobile Dealers Association Convention, New House Hotel, Salt Lake City, Utah.  
Jan. 28-Feb. 1, 1956—39th Annual National Automobile Dealers Assn., Washington, D. C.

### Automobile Shows

- April 25-26—Gregory Automobile Show, Gregory, S. D.  
Jan. 7-15, 1956—Chicago Auto Show, International Amphitheatre, Chicago, Ill.  
Jan. 7-15—St. Louis Auto Show, Kiel Auditorium, St. Louis, Mo.

### General

- May 31-June 3—Design Engineering Show, Convention Hall, Philadelphia, Pa.  
Sept. 6-17—Machine Tool Show, National Machine Tool Builders Assn., International Amphitheatre, Chicago, Ill.  
Sept. 21-22—Federation of Automobile Dealer Associations of Canada, Sheraton-Cadillac Hotel, Detroit, Mich.  
Sept. 22-24—Automotive Parts Rebuilders Assn. Convention, Fort Shelby Hotel, Detroit, Mich.  
Sept. 29-30—National Automobile Transporters Assn. Convention, Sheraton-Cadillac Hotel, Detroit, Mich.  
Nov. 6-7—Texas Independent Automobile Dealers Assn., Inc., 11th Annual Convention, Shamrock Hotel, Houston, Texas.  
Nov. 14—Automobile Old Timers, 16th Anniversary Dinner, Waldorf-Astoria Hotel, New York City.  
Dec. 7-8—A.S.I. Booth Conference, Navy Pier, Chicago, Ill.—Sponsored by M.E.W.A., M.E.M.A., and N.S.P.A.

### Classified Advertisement

Garage, Service Station, Cafe, Highway Location, Colorado, Uranium, Oil and big game country. Steady business year around, good gross, high net. Same owner past 33 years, age forces retirement, sacrifice. Information and free pictures mailed, no obligation. C-5005 Continental 804 Grand Kansas City, Missouri.

## McCULLOCH welcomes more good dealers

A McCulloch Supercharger is the practical reliable answer for your customers who want 35 to 45 percent more power, more performance, without engine modification. If you would like to sell and service this thoroughly tested and proved product, we welcome your inquiry. Please write on your letterhead, giving brief details of your facilities.

### McCULLOCH

#### SUPERCHARGER DISTRIBUTORS

- BAKERSFIELD, CALIFORNIA**  
Bill McNamara, 1705 G. Street
- OCEANSIDE, CALIFORNIA**  
Masters Automotive, 208 South Hill Street
- SAN FRANCISCO, CALIFORNIA**  
Auto Electric Carburetor Co., 131 Fell Street
- DENVER, COLORADO**  
Sports Cars, Inc., 988 Cherokee
- ROCKMART, GEORGIA**  
Drake Motor Company, P.O. Box 187
- BOISE, IDAHO**  
Boise Saw Sales, 3000 State Street
- CHICAGO, ILLINOIS**  
Grancor Automotive Specialists, 5150 N. Western
- TERRE HAUTE, INDIANA**  
Sumar Speed Equipment, 109 N. Seventh St.
- KANSAS CITY, KANSAS**  
Automotive Specialty Co., 34th and Gibbs
- GRAND RAPIDS, MICHIGAN**  
Remes Auto Parts, 2601 Division Ave. South
- ST. LOUIS, MISSOURI**  
Ed Walsh Company, 320 Security Bldg.
- MILES CITY, MONTANA**  
Beacon Carter Service, 305 Main Street
- WOODSIDE, NEW YORK**  
The Momo Corporation, 33-49 55th Street
- FINDLAY, OHIO**  
Farm & Home Supply, Inc., Harrison & Gay Streets
- TULSA, OKLAHOMA**  
Sheppard Buick, 750 South Lewis Street
- PORTLAND, OREGON**  
Jim Flanagan Automotive, 1815 S.E. 50th Street
- PHILADELPHIA, PENNSYLVANIA**  
Frank Bash Automotive, 200 W. Pastorius
- SEATTLE, WASHINGTON**  
Pacific Equipment Co., 1001 Jackson Street
- VANCOUVER, B.C., CANADA**  
McCulloch Co. of Canada, 220 W. First Ave.
- MEXICO, D.F.**  
Automotriz O'Farrell, S.A., Alfonso Herrera 67

## McCULLOCH Supercharger



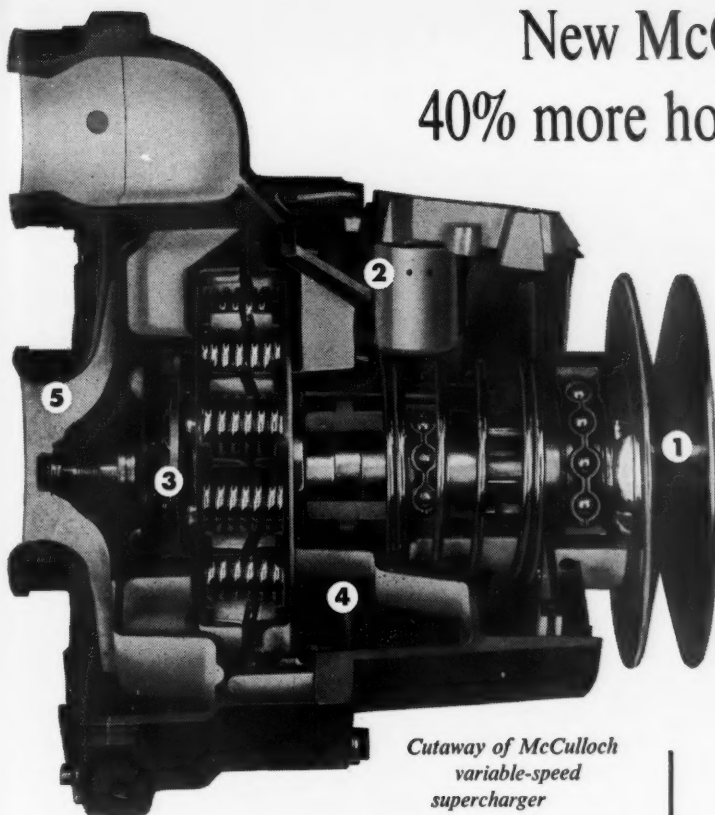
### PAXTON PRODUCTS DIVISION

McCULLOCH MOTORS CORP.  
827 WEST OLIVE STREET  
INGLEWOOD, CALIFORNIA  
ORCHARD 1-8263

5-4405

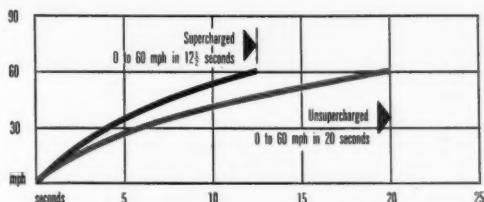


# New McCulloch supercharger adds 40% more horsepower in one easy step!



Cutaway of McCulloch variable-speed supercharger

These features mean positive performance and quiet, long life: 1 Variable-speed drive changes boost automatically to high or low pressure on demand. 2 Automatic control system operates variable-speed drive and regulates maximum supercharger pressure. 3 Ball-bearing 4.4 to 1 speed increaser eliminates gears, and is smooth and noiseless at all speeds. 4 Built-in oil pump and reservoir provides independent, clean lubrication. 5 Light-weight magnesium impeller.



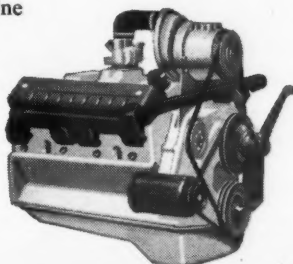
## Thrilling Acceleration

All through the speed range of your car, a McCulloch supercharger gives thrilling acceleration that takes you around traffic obstacles quickly and safely.

## KITS AVAILABLE FOR MANY CARS

Complete supercharger kits, containing all brackets, fittings, belts, pulleys, and detailed installation instructions are available for V8 models of the following cars: Ford (\$255), Ford Thunderbird (\$385), Mercury (\$285), Lincoln (\$350), Buick (\$350), Oldsmobile (\$360), Chevrolet (\$285), Chrysler (\$385), Dodge (\$360), Cadillac (\$385), Studebaker (\$310), and MG-TD (\$255). (Prices slightly higher for some installations due to power accessories.) Custom installations possible on any unsupercharged engine up to 300 hp. Kits also available for truck and diesel engines. Use coupon for information.

Typical installation position of supercharger on V8 engine



Here at last is the easy, inexpensive way to increase horsepower. If we don't answer your question below, let us know.

**Q.** What does this supercharger do?

**A.** It delivers air to the carburetor under pressure, packing more fuel-air charge into the cylinders, which increases horsepower tremendously.

**Q.** What's the horsepower increase?

**A.** On the average, 40% increase at the rear wheels, where it counts. (Typical case—'54 Ford, 42%.)

**Q.** What's different about the McCulloch supercharger's operation?

**A.** It's the only supercharger with *automatic, variable-speed drive*. This gives extra boost on demand at any speed.

**Q.** Does installing the McCulloch supercharger involve engine modification?

**A.** No. The engine remains stock. This supercharger can be transferred easily to your next car!

**Q.** Can it be used on a modified engine?

**A.** Yes, many special installations have been made.

**Q.** Will it harm the engine or affect normal operation?

**A.** No. Actual tests show normal life.

50 MPH	ROAD LOAD	Reserve hp (stock)
50 MPH	ROAD LOAD	Reserve hp (supercharged) (70% more)
60 MPH	ROAD LOAD	Reserve hp (stock)
60 MPH	ROAD LOAD	Reserve hp (supercharged) (125% more)
80 MPH	ROAD LOAD	Res. hp (stock)
80 MPH	ROAD LOAD	Reserve hp (supercharged) (200% more)

## Tremendous Reserve Power

Notice how McCulloch supercharging gives a car far greater reserve power. "Road Load" is the horsepower required to keep a car moving at a constant speed.

**AVAILABLE EVERYWHERE**—New car dealers, garages, and speed shops are now installing and servicing the McCulloch supercharger. If your dealer doesn't have them, ask him to write for details.

# McCULLOCH

Paxton Products Division, McCulloch Motors Corporation  
827 West Olive Street • Inglewood, California

Paxton Products Division  
827 West Olive Street, Inglewood, California

☐ Send free literature and price list on McCulloch supercharger kits. Check here to order kit if local dealer cannot supply you:  
☐ Ship installation kit with supercharger for my car. (Enclose \$50 deposit; pay balance on delivery.)

Make of car \_\_\_\_\_ year \_\_\_\_\_

Power steering? ☐ Yes ☐ No; Power kit? ☐ Yes ☐ No  
Make and type of carburetor \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

# SPECIFIED

for ALL EXPOSED PARTS!



## DOOR-EASE®

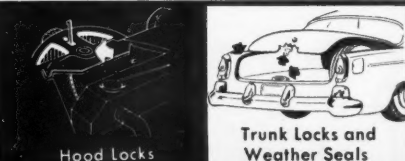
### STAINLESS STICK LUBRICANT

Where cleanliness and performance is a MUST — nothing does the job like DOOR-EASE Stainless Stick Lubricant! Unlike soft grease or oils, DOOR-EASE leaves a smooth-spread-ing, tough, long-wearing film that won't flake or rub off. Won't stain clothing or upholstery. No wonder DOOR-EASE is specified for all exposed parts and fittings by leading car manufacturers and oil companies. Shop size for service use; Universal for resale. From jobbers everywhere.

#### Use DOOR-EASE at these points



Door Lock Bolt and Striker Assemblies



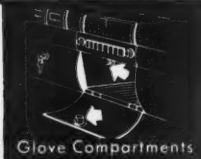
Hood Locks



Trunk Locks and Weather Seals



Door Bumpers



Glove Compartments

Rubber Bumpers, Strips and Hood Lacings . . . Dove Tail Wedges . . . Dome Light Switches . . . Ash Trays . . . Pedal Shafts and all exposed working parts and fittings.

#### REMEMBER . . .

A little DOOR-EASE goes a long way — stops squeaks . . . lasts the life of a lube job. Withstands summer heat and winter cold; water resistant.



**AMERICAN GREASE STICK CO.**  
**MUSKEGON, MICHIGAN**

## Buick Production Setting New Mark

Buick will build more cars in the first seven months of 1955 model production than it did during the entire 1954 model year, Ivan L. Wiles, general manager of Buick and vice president of General Motors, reported recently.

Buick will have produced nearly 465,000 1955 models by the end of May, seven months after production began, predicted Wiles. During the 11 months of the 1954 model year, production totalled approximately 445,000 cars, he said.

"Retail sales of 1955 Buicks already approaches the 300,000 mark," Wiles said. "Some people have expressed amazement at the strength of the automobile market; yet it is not so phenomenal when you look at the remarkable economic growth of our country in the last decade and a half. Since 1941 the number of family spending units with incomes in the \$5,000 and upwards bracket has increased 10 times, from 2,100,000 to 21,000,000. The masses of our people no longer live on the ragged economic edge, but today are our major buyers of goods and savers of money."

HERBRAND



**Herbrand Tools**

Fremont, Ohio

THE BINGHAM-HERBRAND CORPORATION

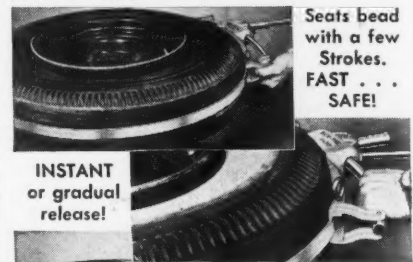
## BOWERS BATTERIES

*Always Better*

BOWERS BATTERY & SPARK PLUG CO., READING, PA.

## KEN-SPEED DUAL-PURPOSE BEAD EXPANDER FOR TUBELESS TIRES

Serves both auto and truck tires! Every tire repair man needs this powerful, positive, fast-acting tool. Safer, easier to use. Built extra strong for longer life. You can't buy better . . . you can't afford less! For your protection, insist on Ken T-130.



INSTANT or gradual release!

Seats bead with a few Strokes. FAST . . . SAFE!



Powerful enough for Tubeless Truck Tires!

#### WHY BUY TWO?

Ken-Speed Bead Expander is the only tool with the extra power to service both auto and truck tubeless tires.

Retail **\$9.90**

IF IT'S A KEN, IT'S BETTER  
See your automotive jobber

**The KEN-TOOL Mfg. Co.**  
AKRON 5, OHIO

**FREE**

## FOREIGN CAR PARTS CATALOG

Pistons  
Valves  
Brakes  
Clutches  
Tools  
Tires  
Lamps for all makes

Prompt delivery on all parts anywhere in the U. S. A.

Write:

**COLUMBIA MOTOR CO.**  
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## SILCO Penetrant

**FREES  
ALUMINUM HEADS  
and MOTOR BLOCK STUDS!!  
LOOSENS FROZEN JOINTS!!**

and 1000 other uses!  
It's concentrated!  
It dissolves rust!  
Has no unpleasant odor!



The Mechanic's Silent Partner!  
Money-back guarantee!

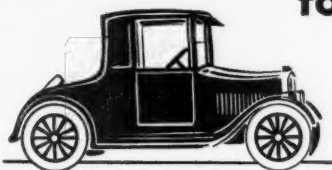
PETROLEUM SOLVENTS CORPORATION, N. Y. 17, N. Y.  
In Canada: Montreal, Que.

Chilton's MOTOR AGE, MAY, 1955

# ARROW GIVES YOU MORE TO SELL

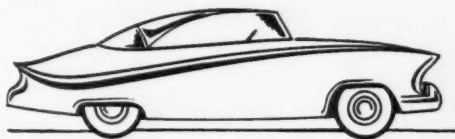
## A Complete Line of rebuilt GENERATORS and STARTERS

### for Passenger Cars



EVERY  
MAKE

EVERY  
MODEL



In stock . . . generators and starters for every make and model. Every unit more carefully made than the part it replaces . . . each one proved by Arrow's own "102" running breakdown test.

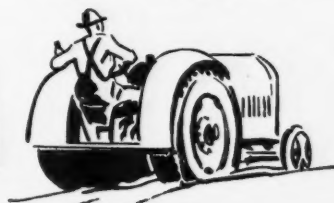
### for Trucks



### for Buses



### for Tractors



In stock . . . the most complete line . . . plus extra sales with Arrow's 24-hour Rush Rebuilding Service for Truck and Bus Generators, Starters and Armatures.

Arrow gives you 3 aids to more profit: 1. A Complete Line 2. Completely Rebuilt Units 3. Effective Merchandising.  
For advance information, use the coupon below. Mail it today!

### ARROW ARMATURES CO.

BOSTON 34, MASS. SPARTANBURG, S. C.



"Arrow gives you the finest quality units . . . more carefully made than the parts they replace."

**Yes**

we want complete information on how Arrow increases profits for Jobbers and Service Shops. Send it to:

Name .....

Company .....

Address .....

City.....State.....

Have ARROW District Manager call.....



# Did you know—? 80.7 per cent of—

MOTOR AGE Readers find helpful ideas in articles.

You can't judge a book by its cover, but you can gauge its net worth by what the reader obtains from its editorial content.

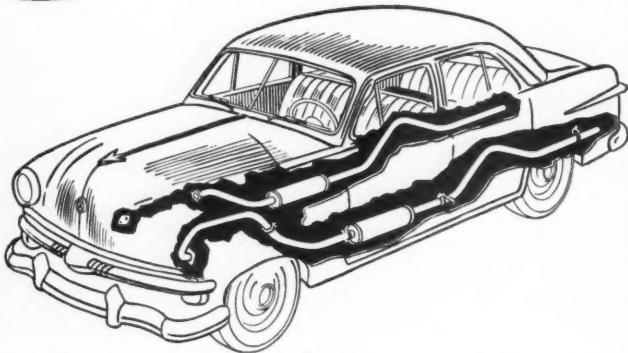
And . . . 8 out of 10 MOTOR AGE readers find valuable tips, helpful ideas that so often prove to be profitable to them from the pages of their automotive service magazine.

65.7 per cent find them profit-producing.

POPULAR

## SPORTSMAN

DUALS



### UPHOLDING SPORTSMAN'S FAMILIAR STANDARDS OF HIGH QUALITY

This is the big year for SPORTSMAN duals, because the public is more "dual conscious" than ever before. With major auto manufacturers increasing this interest by supplying duals as standard equipment for many production models, the motoring public is now demanding the best. Stock SPORTSMAN . . . the industry's most complete line of exhaust systems for V-8 cars.

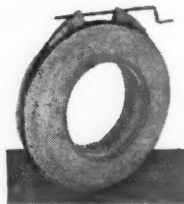
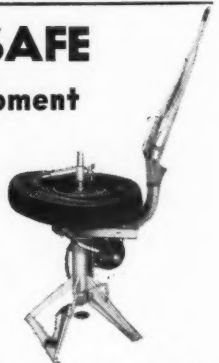
**Arnold Haviland Company, Defiance 11, Ohio**

## Buy Only 100% SAFE

Tubeless Tire Service Equipment

### Buy BISHMAN

The Tire Changer that Cannot Damage Air Seals. Built-in bead breakers ROLL both beads off . . . cannot contact and damage air seals. Tongue that mounts and dismounts tire touches only bottom of bead. #880 Bishman Electric Tire Changer.



100% Safe, Fast Bead Breaker. Double action screw compresses tire evenly, seats both beads for easy inflation. Absolutely SAFE . . . cannot snap open under pressure. #600 Bishman Bead Expander.

The SAFE Bead Breaker. Wide circle show rolls beads off easily, safely. Ruggedly built, portable, easy to use on tubeless and regular tires. #918 Bishman Giant Bead Breaker.



Fast, Positive Tubeless Tire Tester. Wheel is held securely by fast chucking arbor, rolls freely in tank deep enough to find all leaks in tire, air seals, valve and wheel rivets. Avoid comebacks by proper testing. #856 Bishman Tubeless Tire Tester.

Tested and approved by major rubber companies. Ask your jobber or write for complete information.

**Bishman**

MANUFACTURING  
COMPANY  
Osseo 26, Minnesota

# HEADLAMP SALES EXCLUSIVE!

Only Westinghouse Safe-T-Beam<sup>TM</sup>  
shields both low and high beams



Other makes of new headlamps do not shield the high beam. Card held at center of such lamp shows unshielded upper streaks of light that hit fog, blind the driver with reflected glare.

Terrific headlamp sales bonanza just beginning! And here's one sure way for you to get more profitable volume. Push the headlamp that has more consumer-convincing advantages than all others!



## 2-BEAM GLARE SHIELD

gives drivers the maximum See-Ability they need for country as well as city driving. Because the precision-designed Glare-Shield in Westinghouse SAFE-T-BEAM Headlamps shields both filaments, stray upper light is cut off from the high as well as the low beams.



New Westinghouse SAFE-T-BEAM high beam: same card test shows minimum of stray upper light. Only Westinghouse gives you the same glare-cut-off on both high and low beam. Safer, surer See-Ability in all weather.

### Powerful Westinghouse Safe-T-Beam Promotion

Westinghouse is telling drivers everywhere about the new SAFE-T-BEAM Headlamp with 2-Beam Glare Shield—with hard-hitting LIFE and LOOK magazine ads, and action-getting TV commercials.

Dealers cash in with complete free sales kit. Special card to use in convincing Glare Test shown above, plus displays, streamers, sales leaflets and merchandising ideas. Take advantage of this sales exclusive. Order SAFE-T-BEAM Headlamps *and* fast-moving Westinghouse auto bulbs now through your nearest Westinghouse Lamp Sales Office.

YOU CAN BE SURE...IF IT'S  
**Westinghouse**

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DO IT BETTER WITH RIMAC

# Hexset

## TAPS AND DIES!

For greater speed and convenience on new thread-cutting or rethreading jobs, pick your tools from the mechanic's pride — a Rimac Hexset. Taps, dies, hex die stock and guides, and other accessories are all designed for quick, accurate results in confined quarters. Fitted in handsome, permanent, solid wood chests.

Also available—special rethreaders for axle shafts, armature shafts or inverted flared fittings—threadfile for restoring mashed threads of all sizes.

Ask your jobber or write for literature.



**RINCK-McILWAINE, INC.**  
16 HUDSON ST. • NEW YORK 13, N. Y.

## The PIONEER Tool

FOR INSTALLING VALVE SEAT RINGS

The Biggest Seller



THE FIRST . . . and still the MOST POPULAR, MOST PRACTICAL, SIMPLEST, MOST UNIVERSAL tool of its kind made.

EVERLASTING . . . the first tools made over 25 years ago are still in service.



**K.O. LEE CO.**  
ABERDEEN, SOUTH DAKOTA

If it's made by Lee it's a "Knock-Out"

HERE'S THE ANSWER TO

TUBELESS TIRE REPAIRING

**Akro** SERVICE SHOP IN A BOX!

EVERYTHING YOU NEED FOR REPAIRING TUBELESS TIRE PUNCTURES!

TUBELESS TIRE REPAIR KIT



- Includes plugs for every size puncture, lubricating cement and plug-pulling tool.
- Includes free banner identifying dealer as tubeless tire headquarters.
- All repair materials available in bulk.

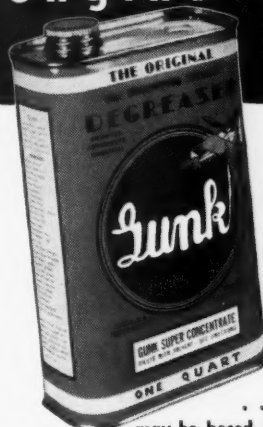
Write for details & free demonstration

"Automotive Service And Know-How Since 1929"  
**THE BUXBAUM COMPANY**  
CANTON 1, OHIO

## DEGREASER!

### engine shampoo

QT. SIZE CONCENTRATE MAKES 2 GALLONS



Takes cling out of oil and grease . . . emulsifies it . . . so that all dirt may be hosed off as easily as you rinse hands under water faucet. Launders engines faster, more completely, and safer than steam cleaning (warm the engine). Self scouring action brings out factory new appearance . . . provides accurate visual inspection . . . Gunked engines run cooler. Get Genuine Gunk in quart and larger sizes at better wholesale auto suppliers throughout the country . . . Flatly refuse imitations.

IMMEDIATE DELIVERY  
1 PINT OR A TANK CAR



**CURRAN CORP.**  
Mfg. Chemists  
LAWRENCE, MASS.

# The Last Laugh



Engineer to small son dragging top half of bikini bathing suit along beach: "Now show daddy exactly where you found it."

Dealer: "Why don't you ever get to work on time?"

Stenographer: "I'm a late model."

A five-year-old girl visiting a neighbor, when asked how many children were in her family, replied: "Seven." The neighbor observed that so many children must cost a lot.

"Oh, no," the child replied, "we don't buy 'em—we raise 'em."

Sonny: "Pop, what's an optimist?"

Pop: "An optimist is a man who thinks his wife has quit smoking cigarettes when he finds cigar stubs in the house."



"What's the matter, Jim, you don't look good?"

"I'm not feeling well. I'm just recovering from a slight case of whisky."

Steno Lou: "Susie, honey, did you ever wake up in the morning with a grouch?"

Steno Sue: "Gracious me, Louvalia, you know I'm saving myself for the man I'm going to marry!"

Dealer: Have any of your boyhood ambitions been fulfilled?

Salesman: Yes. When my mother used to pull my hair I wished that I didn't have any.

Customer: "Gimme a good stiff drink for a pickup!"

Bartender: "You betcha, and now whacha gonna have for yourself?"



Ed: I want you to marry us, parson, and this is the girl who's to be my wife.  
Parson: Very glad to mate you.

"That new photograph of your wife is lifelike."

"I'll say it is! I jump every time I go by it."

He: If I kiss you, will you call for help?

She: Will you need it?

Customer: I want to try on those slacks in the window.

Salesman: Sorry, sir, but you'll have to use the dressing room.

"I hear that Simmons left everything he had to an orphan asylum."

"Is that so? What did he leave?"

"Twelve children."



# History Repeats

Never Duplicated  
*Spiro-Seal*  
is now followed  
15  
years later by

*duomatic  
action*

Duomatic Action is a Ramco achievement resulting from the development of an exclusive combination of the inner ring and spacer into one ring! This "double-action-in-one-ring" is another exclusive profit-making advantage for those who re-ring with Ramco.

15 years ago, Ramco introduced a similarly outstanding origination—No Gap Spiro-Seal. In Ramco 10-Up sets, Ramco ring users have had this exclusive advantage for over 15 years. For today's re-ring jobs, it is still unduplicated.

Will history repeat itself? Will Duomatic Action be your profit-making exclusive for the next 15 years? When you have all the facts from your jobber about the C-9 ring set, we are sure your answer will be "yes." Ramco has done it again!

*Engineering Leadership in Every Set*

R919

# RAMCO

## PISTON RINGS

**10<sub>up</sub>**

for today's Re-Ring Jobs

★

**RTC** for Fleet Re-Ring Jobs

★

**C**

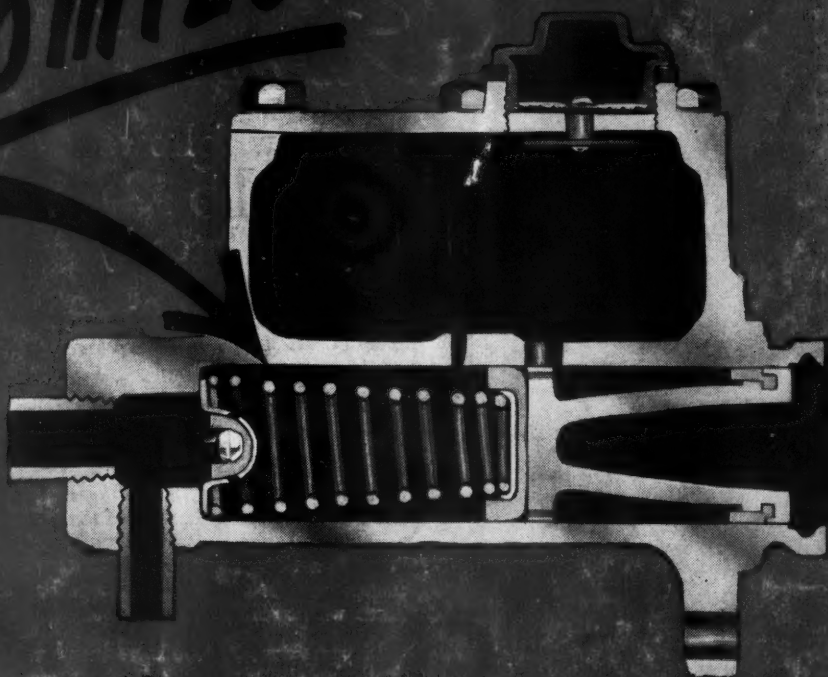
for the New Type Engine Re-Ring Jobs

Ask Your Ramco Jobber for Complete Details or Write Us. Copyright 1955, Ramsey Corporation, St. Louis 8, Missouri



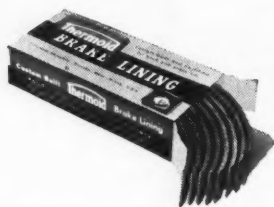
# smooth...but not too smooth!

## Micromized



## master and wheel cylinder walls

Brake cylinder walls that are *too* smooth can't retain the thin film of oil needed for proper lubrication. Getting the right finish on these wall surfaces is an extremely exacting process. That's why Thermoid Master Cylinder Walls are *Micromized*. Never too rough... never too smooth, they're *precision finished* for positive braking action and maximum cylinder life. Insist on genuine Thermoid Hydraulic Brake Cylinder Assemblies, Repair Kits and Parts.



Thermoid Custom Built Brake Lining and Hydraulic Fluid

# Thermoid

Thermoid Company • Trenton, New Jersey

the standard of precision processing in  
brake lining, brake blocks, hydraulic fluid,  
cylinder assemblies, hydraulic brake parts

